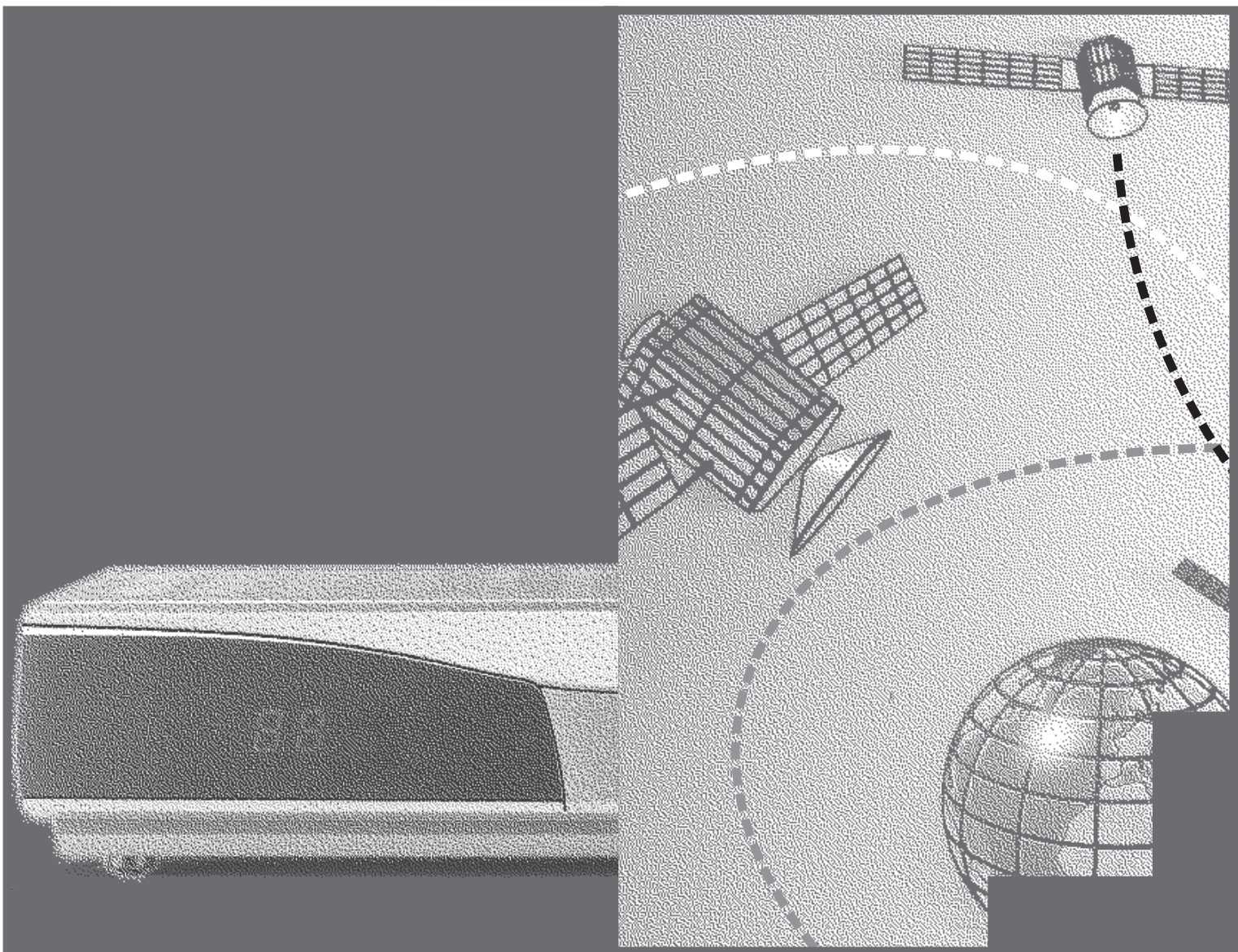


GRUNDIG

DIGITAL SATELLITE TV RECEIVER


DTR 1100







Congratulations on purchasing a Grundig IRD (Integrated Receiver Decoder). With the superior quality Grundig IRD, you can now enjoy direct-to-home satellite broadcasts of this exciting new era of digital TV entertainment, music, news and special interest programmes.





Key features of the IRD include:

- 1** Specified for digital satellite TV reception
- 2** MPEG-2 & DVB compliant
- 3** PAL I/BG selection
- 4** Combined satellite receiver and decoder
- 5** Noise-free TV reception
- 6** Stereo audio comparable to CD quality
- 7** Parental control
- 8** Can be integrated with your existing Hi-Fi, VCR, Pay TV decoder, additional TVs etc.
- 9** Ready for interactive TV, Impulse-Pay-Per-View, Video-on-Demand, etc.
- 10** Over-the-air software upgrades
- 11** On-screen programme guide
- 12** Easy to use menu system for more advanced features
- 13** Remote control
- 14** Skipping and Sorting of Services
- 15** Automatic tuning of all Satellite Services.

 The unit conforms with the protection requirements of the EMC guidelines 89/336/E and 93/68 of the European Council. The standards required for CE certification are kept to.

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Unpacking



Please ensure that the following items are included with the IRD.

- 1 x Conditional Access Module (CAM)
- 1 x Remote Control Unit (RCU)
- 2 x AAA Batteries (lady cells)
- 1 x Flylead
- 1 x User Manual
- 1 x Warranty Card
- 1 x SCART Cable

Preface

The Integrated Receiver Decoder (IRD) introduces exciting new digital satellite technology. This manual provides full information on how to use the IRD and to enjoy the benefits of all its features.

The IRD is easy to use, even for those who are unfamiliar with, or are perhaps intimidated by, modern technology. The more advanced and perhaps more complex features can be avoided until you become comfortable with the basic operation of the system.

The manual provides:



Important safety precautions - please study them.

1

Overview material - read only those parts that interest you. It is not necessary to study the manual from cover to cover before using the IRD.

2

Step-by-step instructions - how to use the IRD and its advanced features.

3

Step-by-step instructions - how to install the IRD and connect it to basic sound and TV systems. It is beyond the scope of this manual to include all of the possible configurations, or dish installation procedures.

4

Troubleshooting guides to assist you if you have difficulty with operating the IRD correctly, or if technical problems occur.

The IRD will be upgraded using over-the-air signals, typically early in the morning. This manual and the IRD are therefore subject to change at any time.

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- ! This IRD has been manufactured to exceed International Safety Standards. Please read the following recommended safety precautions carefully.
- ! **MAINS SUPPLY:**
220-240 V AC 50 Hz ONLY.
- ! **OVERLOADING:**
Do not overload wall outlets, extension cords, or adapters, as this can result in fire or electrical shock.
- ! **LIQUIDS:**
Keep liquids away from the IRD.
- ! **SMALL OBJECTS:**
Coins and other small objects must be kept away from the IRD as they can fall through the ventilation slots of the IRD and cause serious damage.
- ! **CLEANING:**
Disconnect the IRD from the wall socket before cleaning it. Use a cloth lightly dampened with water (no solvents) to clean the exterior of the IRD.
- ! **VENTILATION:**
Do not block the decoder's ventilation slots. Ensure that a free airflow is maintained around the IRD. NEVER stand the IRD on soft furnishings or carpets. Do not use or store the IRD where it is exposed to direct sunlight, or near a heater. NEVER stack other electronic equipment on top of the IRD. N.B. Do not place the IRD in a fully enclosed cabinet.
- ! **ATTACHMENTS:**
Do not use any attachments that are not recommended as these may cause hazards or damage the equipment.
- ! **CONNECTION TO THE SATELLITE DISH LNB:**
Disconnect the IRD from the mains before connecting or disconnecting the cable from the satellite dish.
FAILURE TO DO SO CAN DAMAGE THE LNB.
- ! **INSERTING OR REMOVING THE CONDITIONAL ACCESS MODULE (CAM):**
Mains power must be disconnected before inserting or removing the CAM.
- ! **SERVICING:**
Do not attempt to service this product yourself. Refer all servicing to qualified service agents.

! **LIGHTNING:**
It is recommended that the IRD should remain connected at all times to the mains supply and satellite dish (except when working on the LNB).

The Manufacturer's instructions for safeguarding other equipment connected to the IRD, i.e., TV set, Hi-Fi, etc., must be followed during lightning storms.

Lightning protection devices for the terrestrial antenna, mains, LNB and in the future, the modem telephone line, are essential.

! **EARTHING:**
The LNB cable **MUST BE DIRECTLY CONNECTED** to the installation earth for the satellite dish. The earthing system must comply with VDE 0855, Part 1.

Refer to Installation Indemnity on page 25.

! **NOTE ON ENVIRONMENTAL PROTECTION:**
Do not throw exhausted batteries in the household refuse. Hand over the old batteries to your dealer or public collecting points when buying new ones.

Additional Information for Units sold in Great Britain

Units sold in GB are suitable for operation from a 240 V AC, 50 Hz mains supply.

In case this appliance is supplied with a Safety Standard Approved mains lead fitted with a non-rewireable 13 Amp mains plug which, if unsuitable for your socket, should be cut off and an appropriate plug fitted by a qualified electrician. The fuse and fuse holder must be removed from the plug as accidental insertion of the redundant plug into a 13 Amp socket is likely to cause an electrical hazard.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13 Amp socket elsewhere.

If it is necessary to change the fuse in the non-rewireable plug, the correct type and rating (5 Amp ASTA or BSI approved BS 1362) must be used and the fuse cover must be refitted. If the fuse cover is lost or damaged the lead and plug must not be used until a replacement is obtained. Replacement fuse covers should be obtained from your dealer.

If a non-rewireable plug or a rewireable 13 Amp (BS 1363) plug is used, it must be fitted with a 5 Amp ASTA or BSI approved BS 1362 fuse. If any other type of plug is used it must be protected by a 5 Amp fuse either in the plug or at the distribution board.

Important:
The wires in the mains lead are coloured in accordance with the following code:

BLUE – NEUTRAL
BROWN – LIVE

As the colours of the wires in the mains lead of your appliance may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows:

Connect the BLUE coloured wire to plug terminal marked with the letter "N" or coloured black.

Connect the BROWN coloured wire to the plug terminal marked with a letter "L" or coloured red.

In no circumstance must any of the wires be connected to the terminal marked with a letter "E", earth symbol \perp , coloured green or green and yellow.

Replacement mains lead can be obtained from your dealer.

Digital Satellite Services

i This IRD has been designed to receive and process digital satellite signals from satellites such as Astra and Eutelsat. The satellites act as mirrors in the transmission process, beaming the Service Provider's signals back to your satellite dish. Compared to conventional TV (analogue), digital technology typically presents higher quality pictures, sound comparable to CD quality, and many more services.

i Satellite technology also enables excellent reception of satellite TV services even in remote rural areas where good quality terrestrial reception has never before been possible.

i The term "Services" is used instead of "Channels" because digital compressed TV and audio technology uses the available bandwidth much more efficiently, and several services can use the bandwidth of one channel.

i The signals from the satellite contain data in addition to the digital TV and audio signals. The IRD extracts, processes and stores this information. This provides, for instance, up to date text information on the content and status of the various services at the touch of a button. Convenient facilities are also provided to manipulate received data in order to customise viewing and listening preferences.

i Many more features that are possible due to the nature of compressed digital TV will become available in the near future.

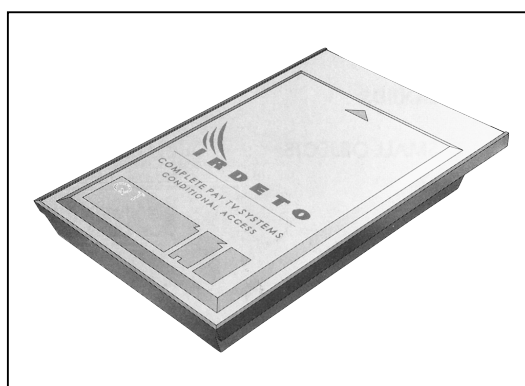
Conditional Access

i Most digital satellite TV and audio services are only available on a subscription basis and can only be enjoyed via the conditional access components. These are the Conditional Access Module and the Smart Card.

Conditional Access Module (CAM)

i The CA Module provides the crucial conditional access technology required to decode the scrambled signals from the Service Provider. The modular approach ensures that the cost of possible future upgrades will be greatly reduced and that the IRD will keep in step with the latest advances in conditional access technology.

The IRD is supplied with the CA Module inserted into its slot in the rear panel.



Smart Card

i You should have purchased a Smart Card from the dealer when you purchased the IRD. The Smart Card looks similar to a credit card and is inserted into the slot behind the right-hand front flap of the IRD.

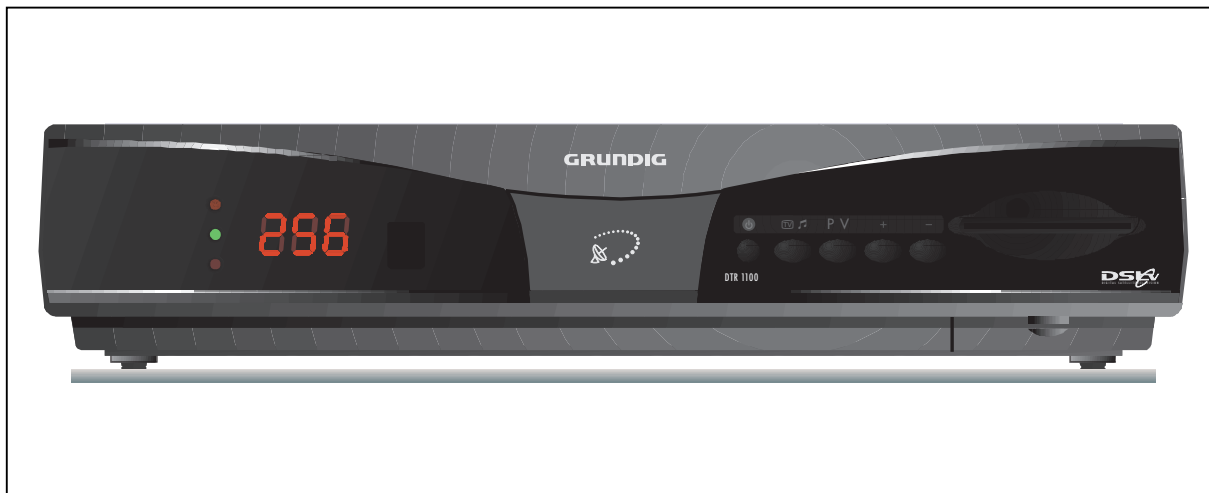
i A valid Smart Card entitles you to view and listen to all the services you choose to subscribe to. Full details of subscription options are supplied with the card.

i Your Personal Identification Number (PIN) and subscription details are stored in the Smart Card.



The Grundig IRD combines a high quality MPEG-2 and DVB compliant satellite receiver, integrated with a sophisticated decoder in one package. The IRD provides all that you need to exploit the exciting new satellite services that are now available.

Front View



Rear View



Front Panel – Open



Display




















<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input checked="" type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R
Red Dot – IRD in standby mode	Service No 17	Green light – Audio Services selected	Rotating signal – busy tuning	Service not found
<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input checked="" type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input checked="" type="radio"/> R	<input type="radio"/> Y <input type="radio"/> G 888 <input type="radio"/> R
Download in progress	Red Dot – flashes when RCU keys are pressed	Yellow light – Mail Messages waiting	Red light – Error indication	Menu selected

Front Panel Keys

Button	Description
	Switches the IRD between normal and standby modes.
PV	Switches between programme selection and volume control.
–	Switches previous service on list or decreases volume level.
+	Selects next service on list or increases volume level.
	Switches between TV and Audio services.

Easy, quick and effortless use of the IRD is possible using the Remote Control Unit (RCU) and the on-screen displays.

RCU Keys Description

-  Switches the IRD between normal mode (Red) and standby mode.
-  (Red) Reserved for future use.
-  Displays the UHF tuning menu when pressed twice. Press once to remove the tuning menu.
-  Displays the local time on the screen for 5 seconds or removes the local time display from the screen.
-  (Blue) Displays the programme information box on the screen or removes the box from the screen.
-  Displays the main menu on the screen or removes the main menu from the screen.
-  Displays the Electronic Programme Guide or removes the Guide from the screen.
-  Cursor Keys - used to step through programmes, browse, and to move the highlight and step through values in menus.
-  Press to go to the previous menu or to exit the menu system when in the main menu.
-  Selects a programme while in the Electronic Programme Guide and selects highlighted options or values in menus.
-  Cycles up or down through the available services.
-  Cycles up or down through the available services.
-  Adjusts the volume.
-  Adjusts the volume.
- Keypad** Keys 0 – 9 – select a TV or an audio service, or are used to key in numbers.
-  Selects audio services.
-  Selects TV services.
-  Displays the soundtrack language information bar for 5 seconds.
-  Mute.
-  Switches the display of subtitles – where applicable – ON and OFF. This function is not yet implemented.



Installation

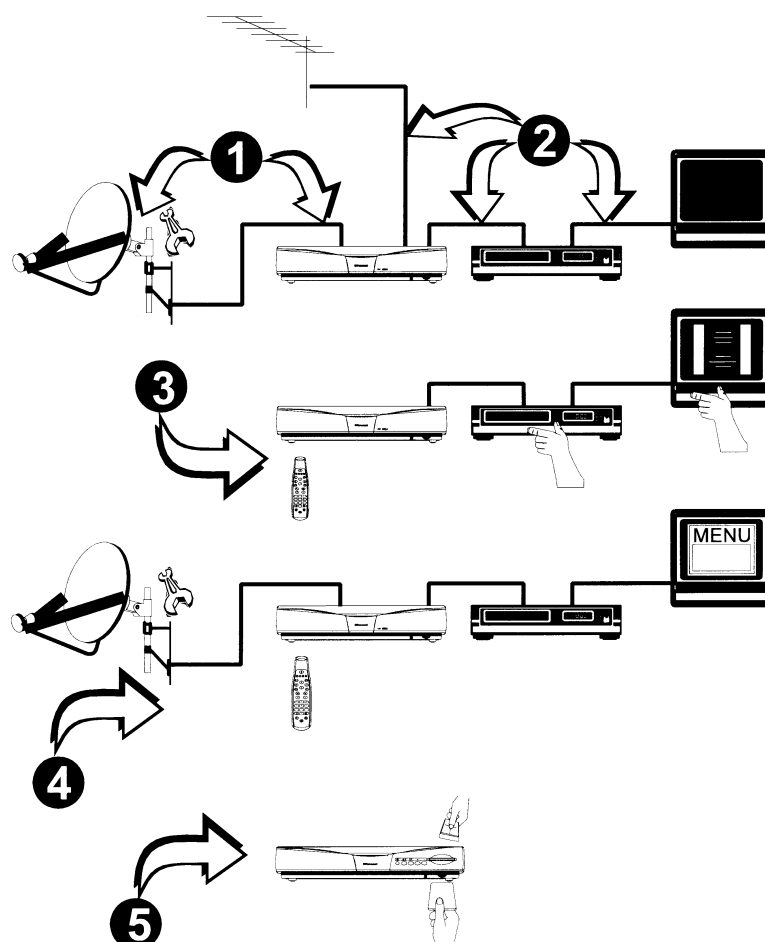
Refer to “Installation” page 25 for detailed instructions on how to install the system yourself. After the initial installation, it will usually only be necessary to refer to parts of the installation section whenever new system additions are installed.

! Do not change the installation, connections, IRD setup or do any retuning on a working system unless absolutely necessary.

Installation comprises the following:



- 1** Installation and initial alignment of the satellite dish and cabling to the IRD. See page 25.
- 2** Connecting the IRD to the TV and other optional equipment in the system. See page 26.
- 3** Tuning the TV set to the IRD and tuning other optional equipment. See page 33.
- 4** Setting installation parameters in the IRD and optional final alignment of the satellite dish. See page 38 (Installation Setup).
- 5** Inserting the Smart Card and CA module. See page 43.

The IRD is now ready to use.



Standby and Normal Mode

! The IRD does not have a power on/off switch and it is recommended that it should remain switched on at the power plug switch after installation.



i When the IRD is not in use it should be switched to the standby mode using  on the front panel or  on the RCU.

i The standby mode is indicated by a constant small red dot in the centre of the IRD display panel.

To use the IRD:



1 Switch on the TV and any other equipment included in the system.

2 Select the channel on the TV that you have designated to the Digital television channel, if necessary.

3 If the IRD is in the standby mode, press  on the RCU (or  on the front panel) to return to the normal mode. A number will be displayed on the front panel.



4 Choose

TV Services

by pressing  on the RCU or, if necessary,  on the IRD front panel. A TV service is displayed on the screen with a TV programme information box at the bottom of the screen.

or

Audio Services

by pressing the  key on the RCU or, if necessary,  on the IRD front panel. An audio service will be heard, and the audio programme information box will be displayed on the TV.

A green indicator on the front panel will be illuminated while the IRD is in the Audio Services mode.

i When you switch from normal to standby mode and back to normal, the IRD will automatically return to the previously selected service.

i If you have a SCART VCR connected, it is not necessary to take the IRD out of standby in order to view VCR play back. SCART VCR must be on in the TV/VCR Settings menu.

Selecting Specific Services

Specific TV or Audio Services can be selected:

1 Directly



2 By stepping through services

3 By using the Electronic Programme Guide (EPG).



Selecting Services Directly

Services can only be selected directly with the RCU. To select a specific service, do the following:

1 If necessary, change to the type of service required by pressing  for TV services or  for audio services.

2 Press the number of the required service on the RCU's numerical keypad.

The specific service will be displayed/heard after a few moments accompanied by an information box at the bottom of the TV screen with details of the selected service.



To select services requiring two-digit numbers, i.e., 10 – 99, it is necessary to press the second digit without pausing after pressing the first digit.



When the key for the first digit is pressed on the RCU, the corresponding number is displayed on the left of the IRD's front panel numerical display. After a few moments, the number moves to the right. The second digit of two digit numbers must be keyed in before this move takes place.





Stepping through Services



Stepping through services is possible using the RCU or the IRD front panel keys.





Stepping with the RCU




To step through services with the RCU, do the following:

1 If necessary, change to the type of service required by pressing  for TV services or  for audio services.


2 Press  to step to the next service or  to step to the previous service in the list of available services.

After pressing  or , an information box is displayed at the bottom of the TV screen with details of the service. After a few seconds, the relevant service is displayed/heard.



3 Continue stepping, if you wish, by pressing  or  until you find the service you prefer. It is not necessary to wait for services to be displayed/heard before stepping to the next or previous service. If you decide to watch or listen to a service you have stepped to, simply wait for the service to be displayed/heard. The information box will disappear after a short while or you can remove it immediately by pressing .



You can only step to available services. When you reach the last available service in the list and press  you are returned to the first service in the list.



Use the convenient skipping and sorting facilities to personalise the services' list. After using these facilities, your favourite services will be in your order of preference during stepping. Refer to page 22.



Stepping with the IRD Front Panel Keys

To step and select a specific service with the IRD front panel keys, do the following:

- 1 If necessary, change to the type of service required by pressing to switch between TV services and audio services.

- 2 Press **+** to step to the next service or **-** to step to the previous service in the list of available services.

After pressing **+** or **-**, an information box is displayed at the bottom of the TV screen with details of the service. After a few seconds the relevant service is displayed/heard.

- 3 Continue stepping if you wish, by pressing **+** or **-** until you find the service you prefer. It is not necessary to wait for services to be displayed/heard before stepping to the next or previous service.

To view/listen to any service you have stepped to, simply wait for the service to be displayed/heard. The information box will disappear after a short while.

- You can only step to available services. When you reach the last service in the list and press **+**, you are returned to the first service in the list.

+ and **-**, have dual functions and cannot be used for stepping while the volume control box is displayed on the screen. This box is displayed when setting the volume, see page 12.

- Use the skipping and sorting facilities to personalise the services' list. After using these facilities, you will only come across your favourite services in your order of preference during stepping. Refer to page 22.

Selecting Specific Services from the EPG

- For a detailed description of the Electronic Programme Guide (EPG) refer to page 13.

- 1 If necessary, change to the type of service required by pressing the RCU key for TV services or for audio services.

- 2 Press on the RCU. The appropriate Guide for the type of service selected (TV or Audio) will be displayed.

The Guide provides text descriptions of the current TV and on-air audio programmes, as well as the next programme scheduled for each TV and audio service.

Please note that TV programmes will not be displayed and audio will not be heard while the EPG screen is displayed.

- 3 Use or on the RCU to scroll up or down the list and move the highlight, as only three items at a time are displayed.

The information box at the bottom of the screen provides more information about the currently highlighted item.

- 4 For more information only on "Up Next" programmes, move between the "Now On" and "Up Next" columns by pressing or .

- 5 While the highlight is in the "Now On" column and on the programme of your choice, press to start viewing or listening to the selected programme.

- The skip facility is not available for EPG lists.

Press to move up the list again.



Press to exit the EPG at any time and return to normal viewing/listening.

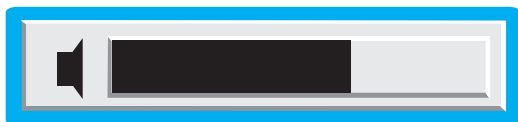
- Use the convenient sorting facility to personalise the EPG list. After using this facility, the services are listed in your preferred order. Refer to page 22.

Controlling the Show


Volume Control using the RCU Keys

To change the volume level do the following:

- 1 Press  to increase the volume level or press  to reduce the volume level.
The following indicator is displayed on the TV screen when adjusting volume:



- 2 The volume level is depicted by the length of the highlight bar.

 The Hi-Fi Audio (Left and Right) outputs can be controlled with the volume control keys.


Volume Control using the IRD Keys

To change the volume level do the following:

- 1 Press P V on the IRD
The following window will be displayed for a brief time:




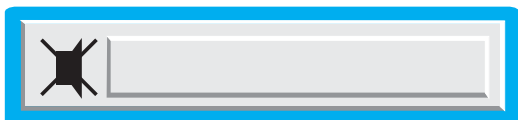
- 2 Only while the volume control window is displayed, press and release + or - respectively to increase or reduce the volume level in separate steps.
The change in volume level is depicted by the changing length of the highlight bar.

 The Hi-Fi Audio (Left and Right) outputs can be controlled with the volume control keys.

Mute


To mute the audio do the following:


- 1 Press  on the RCU.
The following window is displayed for 5 seconds and the audio will be muted:



- 2 To restore the audio press  again.
The audio will be restored at the previous level and the volume control window is displayed for 5 seconds.




- 3 Adjust the volume level using  and .


 The mute function is disabled when the TV audio outputs (Left and Right) of the IRD are used. This ensures a fixed volume level for recording purposes. The Hi-Fi audio outputs (Left and Right) of the IRD can, however, be muted.

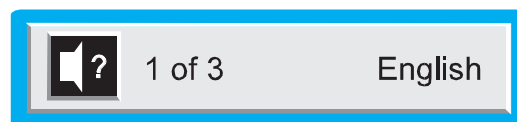
Selecting Soundtracks



Available soundtracks, included with programmes, can be viewed and selected at any time while watching a programme.


 Preferred soundtrack languages for automatic selection can be set using the menu system. Refer to page 20.

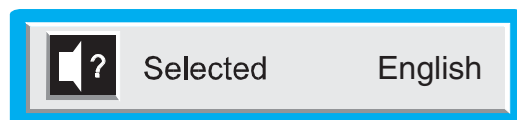
To view and select available soundtracks, do the following:

- 1 Press  on the RCU. The following window is displayed:
The current soundtrack language is displayed.



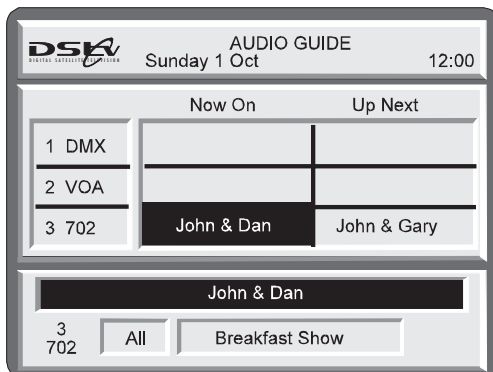
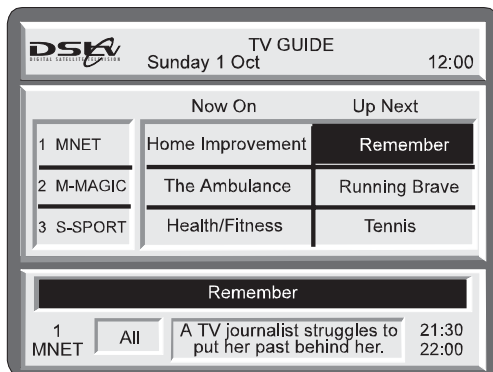
- 2 Press  on the RCU again. If there are additional soundtracks available, the next soundtrack option is listed in the window. Continue pressing  to cycle through all the available soundtracks.

- 3 Press  to select a soundtrack language. The following window is displayed and the new soundtrack is heard:



The IRD stores up to date information, received over-the-air, of all the currently showing TV Services and on-air Audio Services, as well as the next programme scheduled for each TV and Audio service. The information for each programme includes, where appropriate:

- 1 The service number and name
- 2 Title of the programme
- 3 Parental control details
- 4 A brief description of the programme
- 5 Start and end times.



Using the EPG

- 1 If you are listening to an audio programme, and want to see the TV Guide, press **TV** on the RCU. If you are watching a TV programme and wish to view the Audio Guide, press **Audio** on the RCU.

- 2 Press **TV GUIDE**. The Programme Guide for the required service will be displayed.

- 3 Use the cursor keys **Up** or **Down** to scroll up or down the list as only part of the list is displayed.

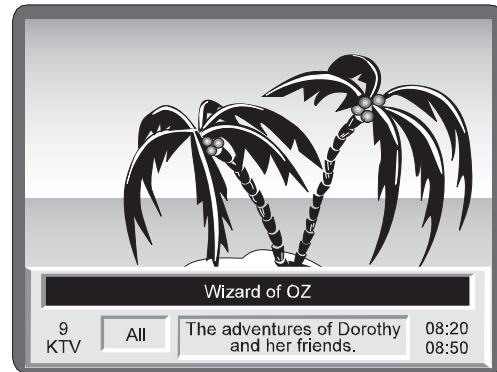
The current programmes are listed in the "Now On" column and the programmes to follow are listed in the "Up Next" column.

The Information Box at the bottom of the screen provides further detail about the currently highlighted programme.

- 4 Move between the "Now On" or "Up Next" programmes by pressing **Left** or **Right**.

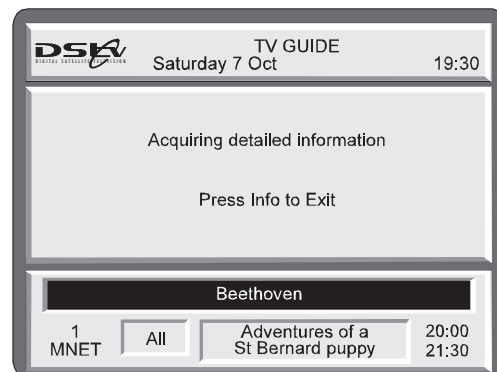
- 5 Select the highlighted programme to view/hear in the "Now On" column by pressing **OK**.

"Up Next" programmes cannot be viewed before their due time and at present nothing will happen when attempting to view them.

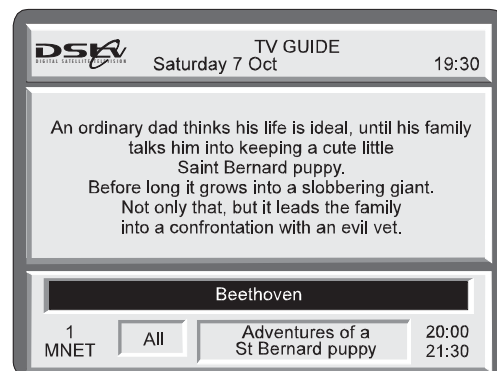


- 6 Additional information on the programmes is displayed when **Info** on the RCU is pressed while the EPG is displayed.

While retrieving the additional information the following screen is displayed. Press **Info** to return to the EPG.



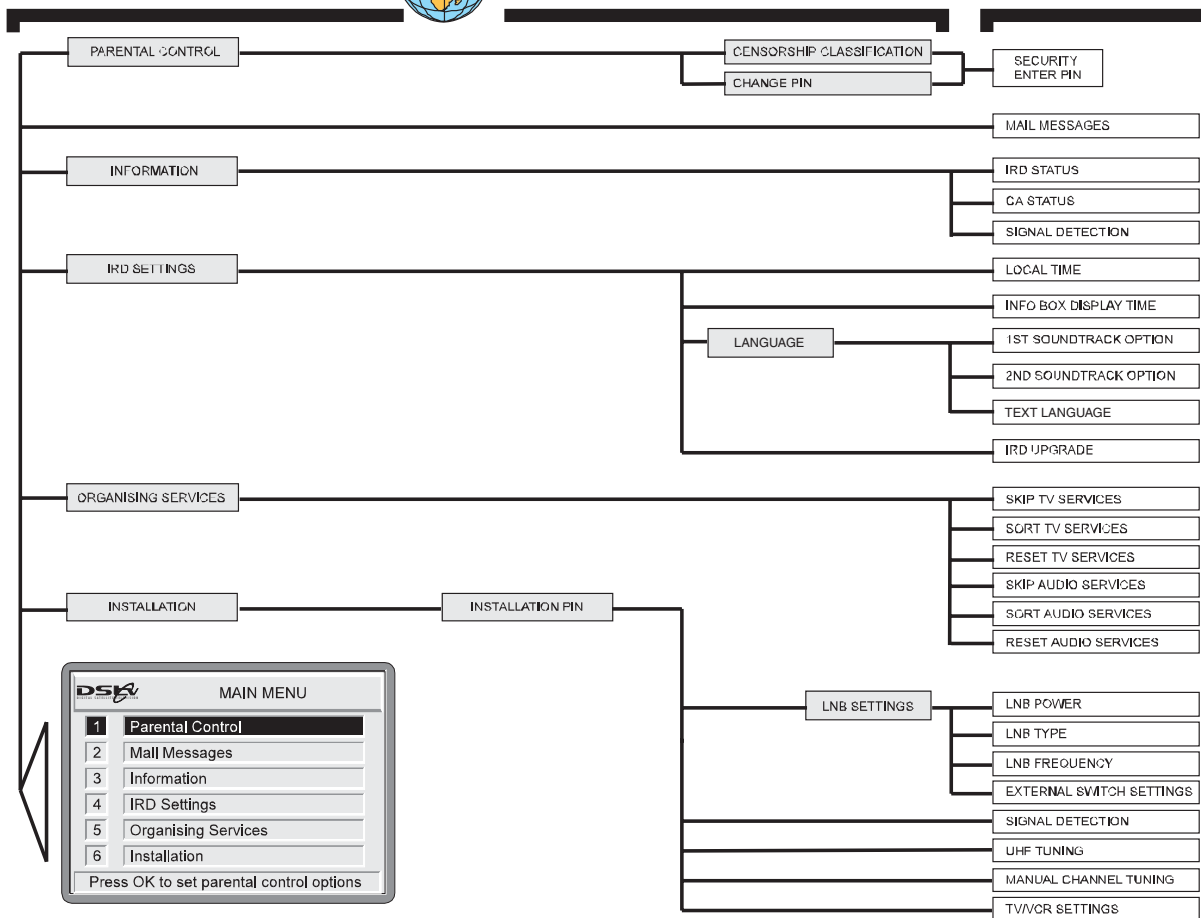
- 7 After a few seconds the additional information is displayed. Press **Info** to return to the EPG.







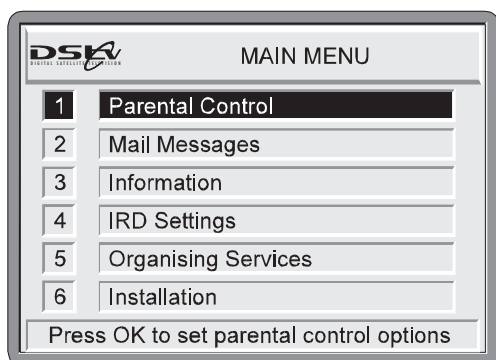
Menu Navigation Route

To Change, See, Set








To use the Menu system:

- 1 Ensure that the IRD is not in standby mode by pressing , if necessary.
- 2 Press  on the RCU.
The Main Menu is displayed on the TV screen.



The Main Menu provides access to all the other menus that branch out from the Main Menu as indicated on page 22.

All the menus are used as follows:

- 1 Press  or  to scroll the highlighted bar up or down.
 - 2 Select a highlighted menu option by pressing  on the RCU. When you press the number on the RCU the menu item is highlighted and selected.
 - 3 Press  to return to the preceding menu.
 - 4 Press  to exit all menus and return to the TV or audio programme.
- i** The Menu displayed on the TV screen can be changed or updated by the provider. This is why there might be some deviations to the version depicted and described in this manual.

Parental Control

The IRD includes a Parental Control facility to control viewing of age restricted programmes. Access to this facility is controlled via a password (PIN).



The PIN is set at the factory to 1 2 3 4. If you intend to use the Parental Control facility, please change the PIN as soon as possible. Remember to keep a note of your new PIN in a secure place.

Parental Control can only be effectively applied to scrambled programmes.

The following table describes the various options that are available.

PARENTAL PREFERENCES	SELECT MENU OPTION
No scrambled programme can be viewed	Family and remove Smart Card
Programmes with the classification "Family" can be viewed	Family
Programmes classified as "Family" or "6" can be viewed	6
Programmes classified as "Family", "6", or "10", can be viewed	10
Programmes classified as "Family", "6", "10", or "14" can be viewed	14
Programmes classified as "Family", "6", "10", "14", or "18" can be viewed	18
All programmes can be viewed	No block

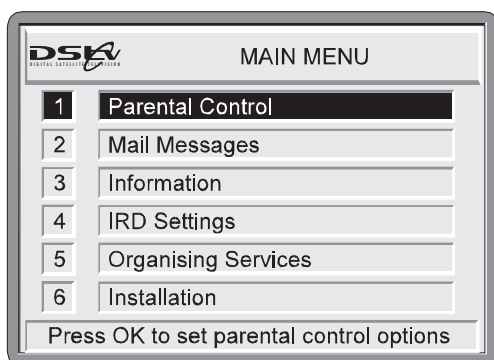


Refer to page 20 for automatic soundtrack censorship.

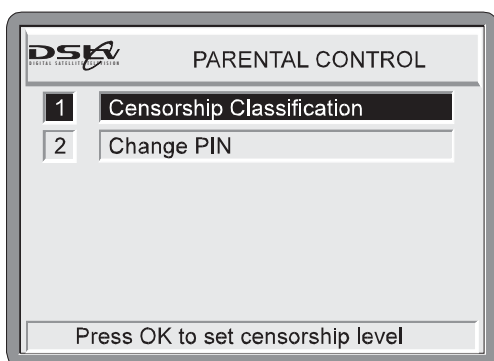
Setting the Censorship Classification

To set the censorship classification, do the following:

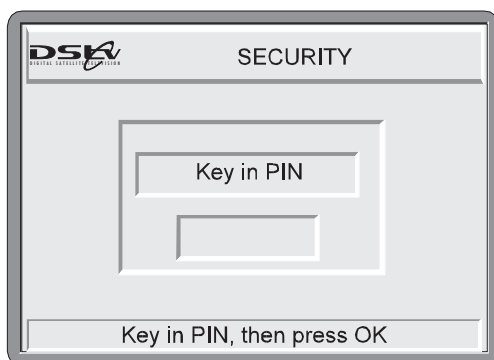
- 1 Press **MENU** on the RCU.
The Main Menu is displayed.



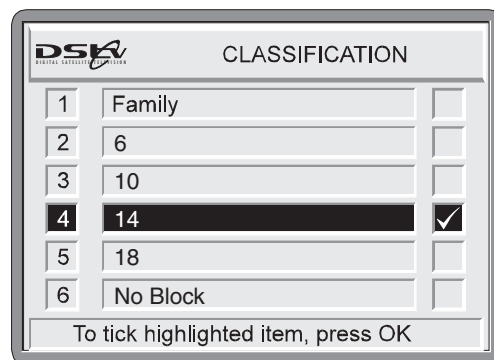
- 2 Press 1 Parental Control.
The Parental Control Menu is displayed.



- 3 Press 1 Censorship Classification.
The Security screen is displayed.



- 4 Enter your password (PIN) using the keypad. See note.
Press **OK** after the required 4 digits have been entered.
The Classification screen is displayed.



If the incorrect PIN is entered, the previous menu (Parental Control) is displayed. Repeat steps 3 and 4 to proceed.

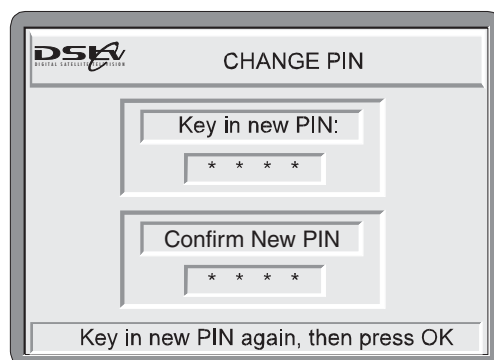
- 5 Choose the restriction (or IRD lock) that you wish to apply using **Δ** or **▽** on the RCU.
- 6 Select your choice by pressing **OK** on the RCU.
- 7 Press **EXIT** to return to the previous menu or **MENU** to return to the service.

Changing the Password (PIN)

i This is not the installation PIN referred to in the Installation section.

To change the PIN, do the following:


- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 1 Parental Control.
The Parental Control Menu is displayed.
- 3 Press 2 Change PIN.
The Security screen is displayed.
- 4 Key in your PIN.
- 5 Press **OK** on the RCU.
The Change PIN screen is displayed.



- 6 Follow the instructions displayed on the screen to change the PIN to its new value.
- 7 Press **EXIT** to return to the previous menu or **MENU** to return to the service.

Mail Messages

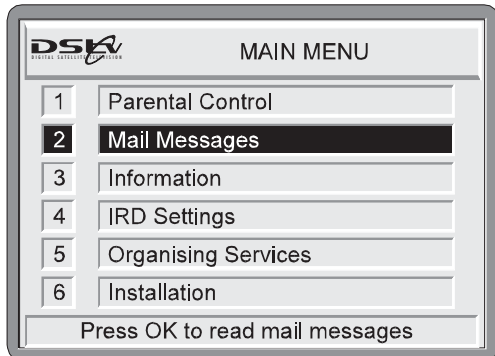
The Service Provider can send global or individual messages over-the-air. When a message has been received the yellow front panel indicator will be illuminated.

The  icon will also be displayed on every menu screen.

To read the message do the following:

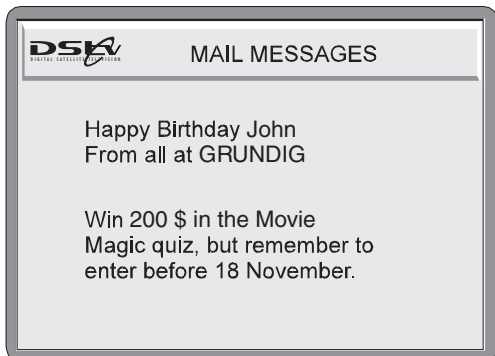
- 1 Press  on the RCU.

The Main Menu is displayed.



- 2 Press 2 Mail Messages.

The Mail Messages screen is displayed with the messages.



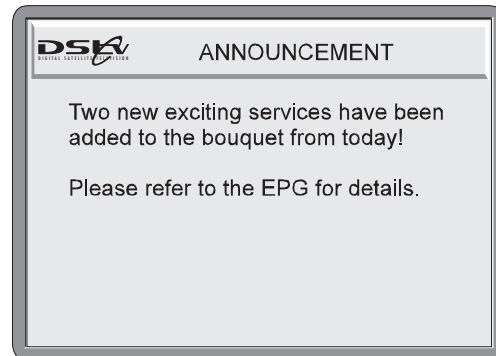
- 3 After reading the message, press  to return to the previous menu or  to return to the service.

The front panel yellow indicator will be OFF and the icon will no longer be displayed.



Announcements

Announcement messages can be displayed at any time, irrespective of the current application of the IRD, i.e., whether you are scanning an EPG, viewing a TV service, or if you have selected a menu, the text content of the announcement will be displayed.

An example of this type of message is shown below:



If the IRD is in the standby mode when the announcement is transmitted, the text will be saved in memory and as soon as the IRD is activated, the text will be displayed.

The announcement message will be displayed for FIVE minutes only. If the announcement display interrupts the programme you are viewing, remove the announcement by pressing  or  on the RCU.

Information

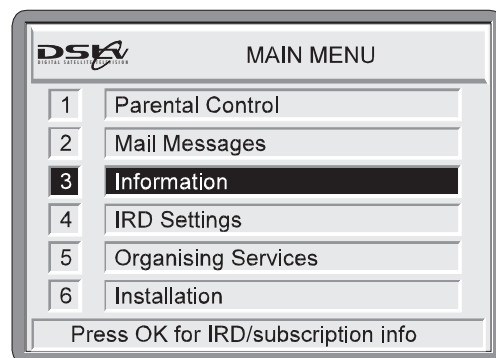
The Information Menu has two sub-menus, IRD Status and Conditional Access Status which provide important diagnostic and version information to technical personnel. You may be asked to read some of this information to Helpline personnel.

To view the information do the following:

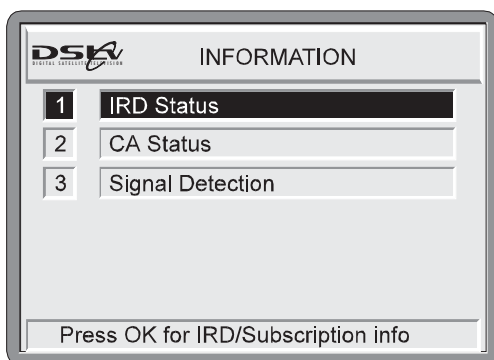
IRD Status

- 1 Press  on the RCU.

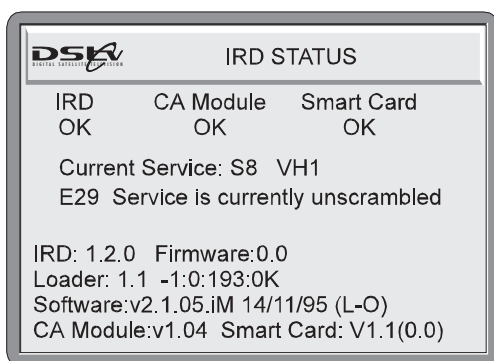
The Main Menu is displayed.



- 2 Press 3 Information.
The Information Menu is displayed.



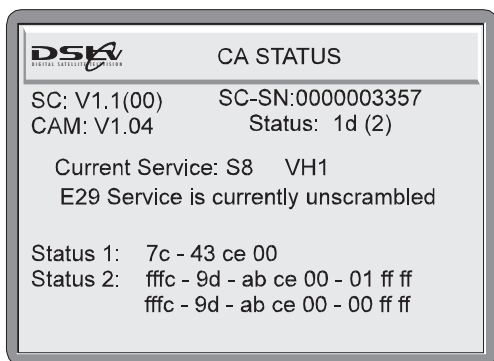
- 3 Press 1 IRD Status.
The IRD Status screen is displayed.



- 4 To exit the IRD Status information screen, press **EXIT** to return to the previous menu or press **MENU** to return to the service.

CA Status

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 3 Information.
The Information Menu is displayed.
- 3 Press 2 CA Status.
The CA Status Menu is displayed.



- 4 To exit the CA Status Information screen, press **EXIT** to return to the previous menu or press **MENU** to return to the service.

Signal Detection

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 3 Information.
The Information Menu is displayed.
- 3 Press 3 Signal Detection.
The Signal Detection screen is displayed. For more information refer to page 41.
- 4 To exit the Signal Detection screen, press **EXIT** to return to the previous menu or press **MENU** to return to the service.



IRD Settings

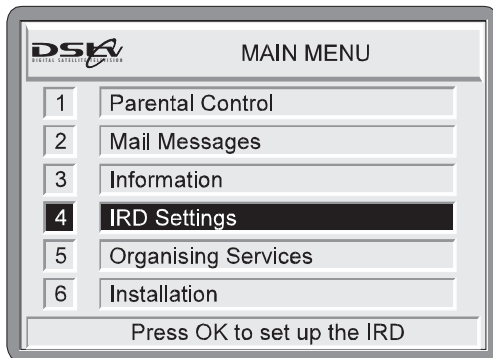


Local Time

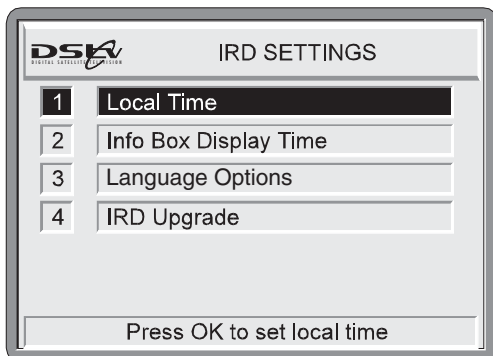
The Local Time setting adjusts the time, taking time zones into account. When you are in a different time zone than the Service Provider, the time used by the IRD for displaying programme information should be changed.

The Local Time is set as follows:

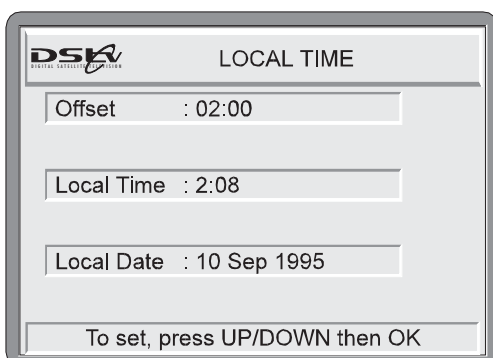
- 1 Press **MENU** on the RCU.
The Main Menu is displayed.



- 2 Press 4 IRD Settings.
The IRD Settings Menu is displayed.



- 3 Press 1 Local Time.
The Local Time screen is displayed.



- 4 Use **△** or **▽** to change the offset time until the "Local Time" equals your time. Each time the **△** or **▽** key is pressed, the offset changes by 30 minutes.



Ensure that the date is correct. Change the offset to correct the date, if necessary.

The screen will show the local time and date.

- 5 Confirm the setting by pressing **OK** on the RCU.
The message "Time Saved" is displayed
- 6 Press **EXIT** to return to the Main Menu or **MENU** to return to the service.

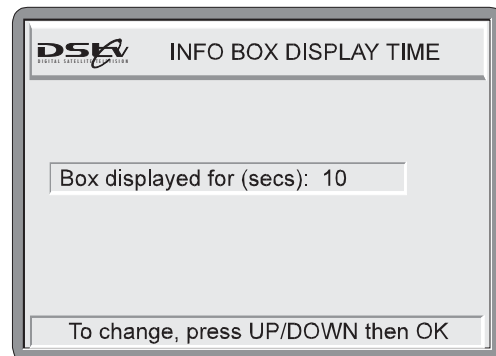


Info Box Display Time

The Information Banner will remain on the screen for 10 seconds.

This timeout period can be changed as follows:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 4 IRD Settings.
The IRD Settings Menu is displayed.
- 3 Press 2 IRD Settings .
The Info Box Display Time screen is displayed.



- 4 Use **△** or **▽** to increase or decrease the timeout period between 1 and 20 seconds.
- 5 Press **OK** to save the selected value.
The message "New timeout saved" is displayed
- 6 Press **EXIT** to return to the previous menu or **MENU** to return to the service.



The Info Box can be removed before the defined time has lapsed by pressing **i**. The box can be displayed as long as required by pressing **i** while viewing/listening to a service. Press **i** to remove the box.



Language Options

Some television programmes may be transmitted with soundtracks in alternative languages. You can select soundtrack preferences for two soundtracks. If the transmitted programme includes one of your preferences, it will automatically use that preference. If the available soundtracks include both your preferences, your 1st soundtrack preference will be used.

The text language of the menu screens can also be selected in the Language Options Menu.



During a programme, you can check which soundtracks are available and change the soundtrack selection with the **OK** key.

"Family" means that strong language has been removed. This option may not be available on all soundtracks.

Setting Soundtrack and Text Language Preferences

1

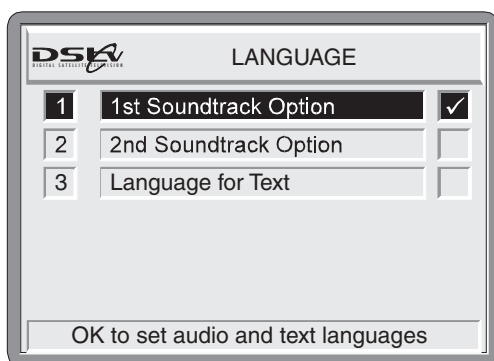
Press **MENU** on the RCU.
The Main Menu screen is displayed.

2

Press 4 IRD Settings.
The IRD Settings Menu is displayed.

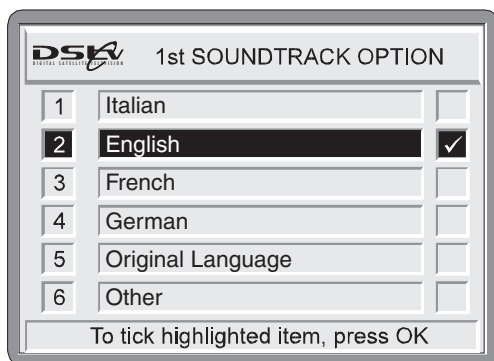
3

Press 3 Language Options.
The Language Menu is displayed.



4

Press 1 for the 1st Soundtrack option. The 1st Soundtrack Option Menu, with a selection of six languages, is displayed.



5

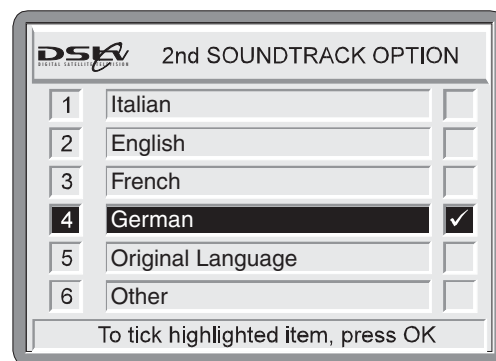
Move the highlight bar in the screen to your first preferred language by pressing **Δ** or **▽** or the menu line number on the RCU.
Confirm your selection by pressing **OK**.
A **✓** is displayed next to your choice.

6

Press **EXIT** to return to the Language Menu.

7

Press 2 for the 2nd Soundtrack Option.
The 2nd Soundtrack Option Menu, with a selection of six languages, is displayed.



8

Move the highlight bar in the screen to your second preferred language by pressing **Δ** or **▽**, or the menu line number on the RCU.

Confirm your selection by pressing **OK**.

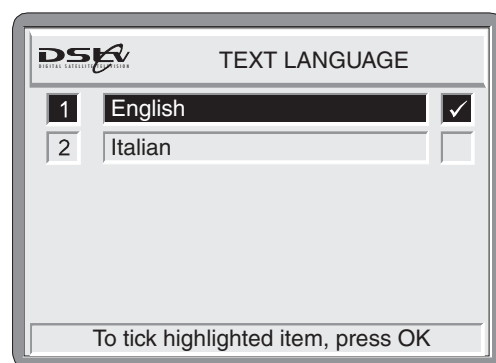
A **✓** is displayed next to your choice.

9

Press **EXIT** to return to the Language Menu or **MENU** to return to the service.

10

Press 3 for the Text Language selection.
In the Text Language Menu you can select English (Inglese) or Italian (Italiano) for the text language of the menu screens.



11

Move the highlight bar in the screen to your preferred language by pressing **Δ** or **▽**, or the menu line number on the RCU.

Confirm your selection by pressing **OK**.

A **✓** is displayed next to your choice.

12

Press **EXIT** to return to the Language Menu or **MENU** to return to the service.



IRD Upgrade

Upgrades involve replacing the software (programmes) in the IRD with improved software, adding more features and improving the existing operation of the IRD. This approach ensures that the IRD does not have to be replaced each time advances in technology occur. By replacing the software, you get a “new” IRD.

IRD Software (S/W) upgrades normally take place automatically over-the-air. The Mail Message Menu (refer to page 17) will usually warn you that a software upgrade will take place. S/W upgrades will usually occur in the early morning and last approximately 30 minutes, during which time normal satellite viewing is not possible.

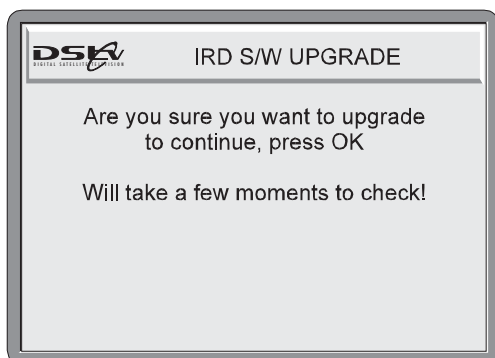
A facility is provided whereby you can check if a S/W upgrade is available and you can then start the upgrade yourself. This will be necessary if the IRD has not been upgraded over-the-air due to, for instance, prolonged power failures.

To upgrade the IRD S/W or check whether an upgrade is available, do the following:

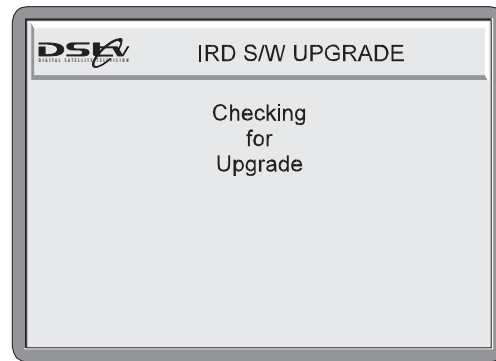
- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 4 IRD Settings
The IRD Settings Menu is displayed.
- ! It is recommended that you should only choose to upgrade on advice from DSTV service centres.
- 3 Press 4 IRD Upgrade.
The IRD Upgrade screen is displayed.
At this point, depending on whether an upgrade is available or not, one of the following two screens is displayed:



- 4 If no upgrade is available, press **EXIT** to return to the service.



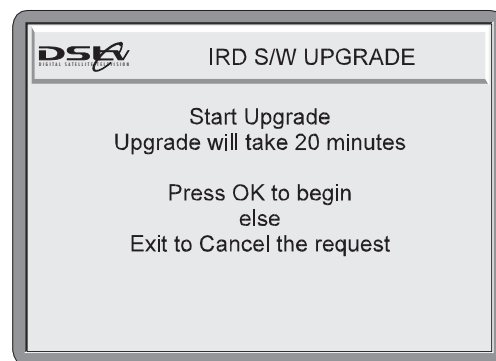
- 5 If an upgrade is available and you do not wish to upgrade, press **EXIT** to return to the service.
- 6 If you wish to upgrade, press **OK**. The following screen is displayed:



The IRD will then check whether the available upgrade is appropriate. If your IRD does not require upgrading, the following screen is displayed:



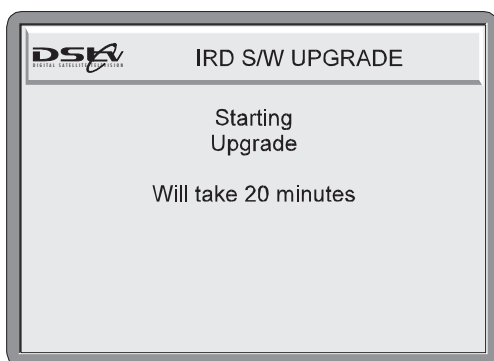
- 7 Press **EXIT** to return to the service.
- 8 If an upgrade is available, the following screen is displayed:



Press **OK** to start the upgrade or press **EXIT** to return to the service. If you press **OK**, the following will happen:



a. The following upgrade screen is displayed for a few seconds:



b. After a few minutes the TV screen will go blank and normal viewing will not be possible until the upgrade has been completed.

c. The IRD will initially display dL and will then start to display various technical codes which are not discussed in this manual.

d. When the download has been completed, the IRD will return to the normal mode and you can resume normal viewing/listening.

! Downloads may change IRD installation settings to default values. If the IRD does not work after a download, refer to Installation page 36 and the values that should have been written down on page 49.

Downloads may also change "sort" and "skip" order preferences. In the following you find help in restoring your preferences.

Organising Services

! Main Menu option 5 Organising Services can only be selected after a successful installation and receipt of programming information over-the-air. Before this happens, Organising Services is dimmed and cannot be selected. The option can also become unavailable afterwards if, for instance, the cable to the dish is disconnected or if installation settings are changed incorrectly.

Organising TV and Audio Lists

When the IRD receives digital satellite signals, it also receives text information about the television and audio services that are being broadcast. The IRD automatically stores this continually updated information which you can view at any time.

The IRD also provides skip and sort features to allow you to arrange the service lists according to your own preference.

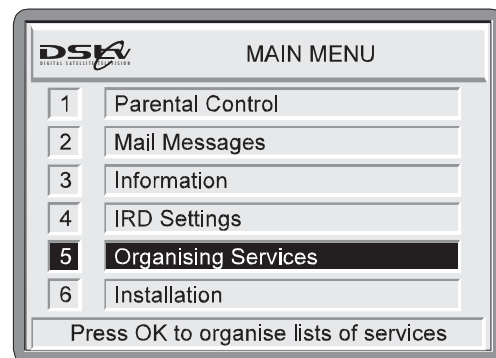
Skip TV Services

You may prefer that the list of services should only contain your favourite services or should not list services you do not yet subscribe to.

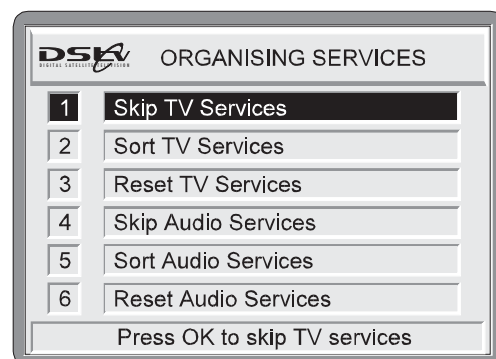
i By marking a service to be skipped, it will not be selected when stepping through the programme list by pressing **P+** or **P-**. You can select even the skipped services by pressing the number of the required service on the RCU's numerical keypad.

To skip TV services, do the following:

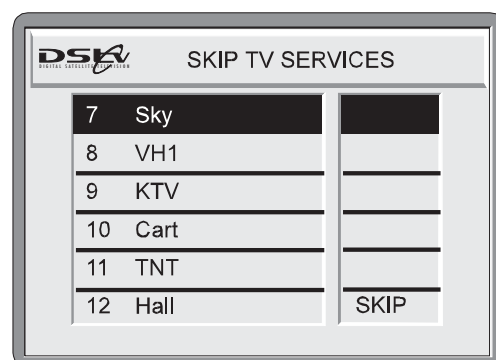
1 Press **MENU** on the RCU.
The Main Menu is displayed.



2 Press 5 Organising Services.
The Organising Services Menu is displayed.



3 Press 1 Skip TV Services.
The Skip TV Services screen is displayed.



4 Choose the service to be skipped using **Δ** or **▽** on the RCU.

5 Press **OK** on the RCU to select the service to be skipped.
The word "SKIP" will be displayed next to the selected service.
Pressing **OK** on the RCU again will undo a selection and the word SKIP will be removed.

6 Select all the services you wish to skip.



7 Once your selections are complete, press **EXIT** on the RCU to save your selections and to return to the Organising Services Menu.

8 Press **EXIT** to return to the Main Menu or **MENU** to return to the service.

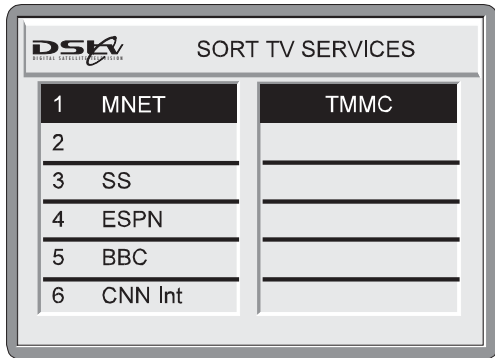
i All "skipped" services will be restored when the Reset function is used. Refer to page 23.

Sort TV Services

This feature allows you to sort the list of TV services into the order you prefer.

To sort the TV services, do the following:

- 1** Press **MENU** on the RCU.
The Main Menu is displayed.
- 2** Press 5 Organising Services.
The Organising Services Menu is displayed.
- 3** Press 2 Sort TV Services.
The Sort TV Services screen is displayed.



Sorting is achieved by replacing services that you require to move down the list with services that should move up.

- 4** Choose the service that you wish to move (sort) up in the list using **△** or **▽** on the RCU.
- 5** Press **OK** on the RCU to select the service. The service moves to the right-hand column.
- 6** Using **V+** on the RCU, move the service up in the list until it is next to service you want to move down the list.
- 7** Press **OK** on the RCU to swap the service in the left column with the service in the right column.
- 8** Using **▽**, move the service that is now in the right column down until it is next to the empty position in the left column.
- 9** Press **OK** to move the service to the empty position.
- 10** Repeat steps 1 to 9 until all services are sorted as you prefer.
- 11** Press **EXIT** to return to the previous menu or **MENU** to return to the service.
The sorted list is stored in the IRD.

i All sorted services will be restored when the Reset function is used.

Reset TV Services

To reset the TV services to the order supplied by the Service Provider, do the following:

- 1** Press **MENU** on the RCU.
The Main Menu is displayed.
- 2** Press 5 Organising Services.
The Organising Services Menu is displayed.
- 3** Press 3 Reset TV Service.
The Reset Service List screen is displayed.



- 4** Press **EXIT** if you do not wish to change the Services list.
- 5** Press **OK** to reset the Services list to the list supplied by the Service Provider.
A confirmation message »The TV Service list has been reset« is displayed on the screen.
- 6** Press **MENU** on the RC to return to the service.

Skip Audio Services


To skip audio services, do the following:

- 1** Press **MENU** on the RCU.
The Main Menu is displayed.
- 2** Press 5 Organising Services.
The Organising Services Menu is displayed.
- 3** Press 4 Skip Audio Services.
The Skip Audio Services screen is displayed.
- 4** The remaining steps are the same as those for skipping TV services, from and including step 4.



Sort Audio Services


To sort the audio services, do the following:

- 1** Press  on the RCU.
The Main Menu is displayed.
- 2** Press 5 Organising Services.
The Organising Services Menu is displayed.
- 3** Press 5 Sort Audio Services.
The Sort Audio Services screen is displayed.
- 4** The remaining steps are the same as those for sorting TV services, from and including step 4.



Reset Audio Services

To reset the audio services to the order supplied by the Service Provider, do the following:

- 1** Press  on the RCU.
The Main Menu is displayed.
- 2** Press 5 Organising Services.
The Organising Services Menu is displayed.
- 3** Press 6 Reset Audio Services.
The Reset Services List screen is displayed.
- 4** The remaining steps are the same as those for resetting TV services, from and including step 4.

Installation

The description of the Installation menu is part of the next chapter.

Installation of the satellite dish and cabling to the IRD

i A description of the installation procedures for satellite dishes and cabling to IRDs is outside the scope of this manual. Please refer to the manuals provided with your satellite dish and associated equipment if you decide to do the installation yourself.

Installation Indemnity

1 In order for the system to operate, a satellite dish and a Low Noise Block Converter (LNB) installation are required.

2 Exclusion

Each and every INSTALLER acts as an independent contractor and is not a servant, sub-contractor or agent of Grundig. Grundig is, accordingly, not liable for any loss or damage of any nature whatsoever caused by the conduct of the installer, including but not limited to:

- any direct, indirect or consequential damages of any nature or any loss of profit or other special damages of any nature which the USER may suffer as a result of any breach by the INSTALLER of any of its obligations to the USER;
- any loss or damage to any property of the user or any third party, situated on the USER's premises even if loss or damage arises out of any part of the INSTALLER.

Grundig does not directly or indirectly warrant or guarantee or make any representations whatever with regard to any equipment, including, but not limited to any dish, any LNB, or any cabling, used by the INSTALLER.

Subject to any express written warrant or guarantee given Grundig, in writing, Grundig does not:

- give any warranty or guarantee or make any representation whatever in respect of any work carried out by the INSTALLER;
- accept any liability for any latent or other defect in any work carried out by the INSTALLER.

IRD Connections

Introduction

There are several ways of connecting the IRD to your existing audio/TV system. A complete discussion of the connection methods is beyond the scope of this User Manual.

Illustrated on the following pages are seven sample connection methods:

- a minimum system; IRD and TV.
- a basic system; IRD, VCR and TV.
- a method designed for maximum quality; IRD, VCR (Stereo Audio Inputs), TV (Stereo Audio/Video Inputs).
- a method using a SCART cable between the IRD and the VCR; IRD, VCR (Scart Interface), TV (RF In).
- a method using a SCART cable between the IRD and the VCR and another SCART cable between the IRD and the TV; IRD, VCR (Scart Interface), TV (RF In/Scart Interface).
- a method which shows how a Hi-Fi can be included in the system; IRD, TV, (Video Input), Hi-Fi.
- a method which includes an analogue Satellite TV Receiver, Hi-Fi, VCR, IRD, TV, and STR.

These sample methods enable you to view satellite services and terrestrial channels. Some of the methods enable listening to CD quality stereo sound.

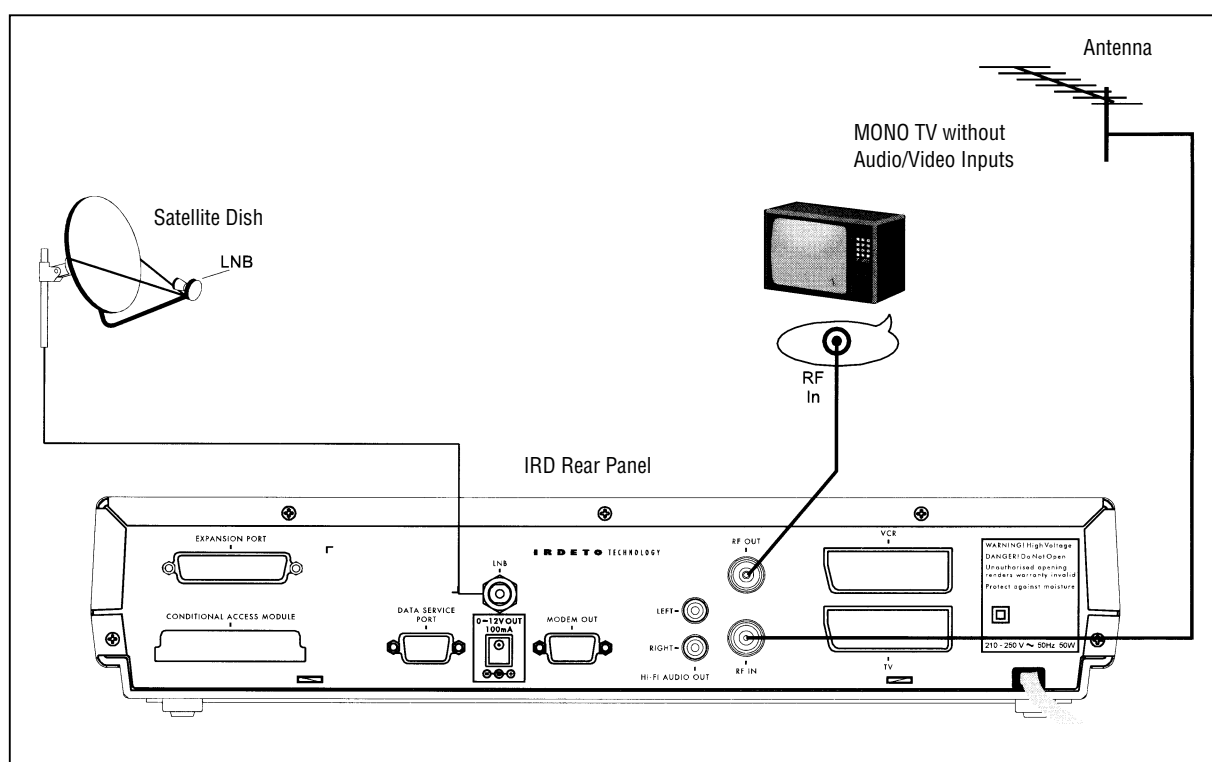
Consult your local supplier for assistance in setting up an audio/video configuration best suited to your unique requirements.

Hints to Quality TV System Configurations

- 1** Connect cables via audio/video outputs/inputs instead of RF connectors, where possible.
 - 2** Use an appropriate, correctly installed antenna/dish system.
 - 3** Ensure that the system is properly earthed and protected against lightning.
 - 4** Connect the IRD to high quality stereo TV and Hi-Fi equipment.
- !** When Video and Audio Inputs/Outputs are used, a Video mode may need to be selected in place of a TV mode on the VCR and TV.

IRD and TV

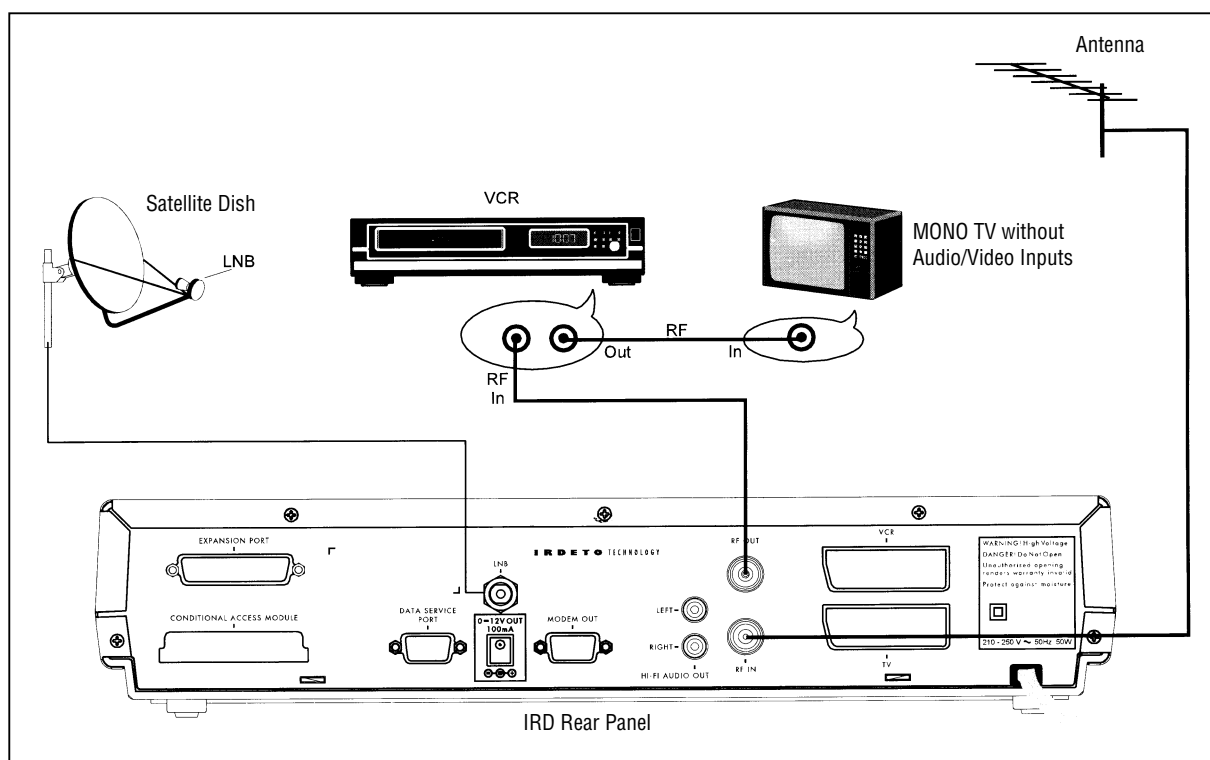
- 1 Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the LNB should be turned until it is finger tight.
 - 2 Connect the terrestrial antenna into the RF IN socket on the IRD.
 - 3 Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN (aerial) socket of the TV.
 - 4 Connect the power plug of the IRD into the mains wall socket and switch the power on.
 - 5 Refer to Tuning (TV to IRD), page 33.
- ! Disconnect the IRD from the mains before connecting or disconnecting the LNB.



IRD, VCR and TV

- 1** Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the antenna connector into the RF IN socket on the IRD.
- 2** Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN (aerial) connector on the VCR.
- 3** Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN (aerial) connector on the TV.
- 4** Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the LNB should be turned until it is finger tight.
- 5** Connect the power plug of the IRD into the mains wall socket and switch the power on.
- 6** Refer to Tuning (VCR to IRD), page 33.

! Disconnect the IRD from the mains before connecting or disconnecting the LNB.

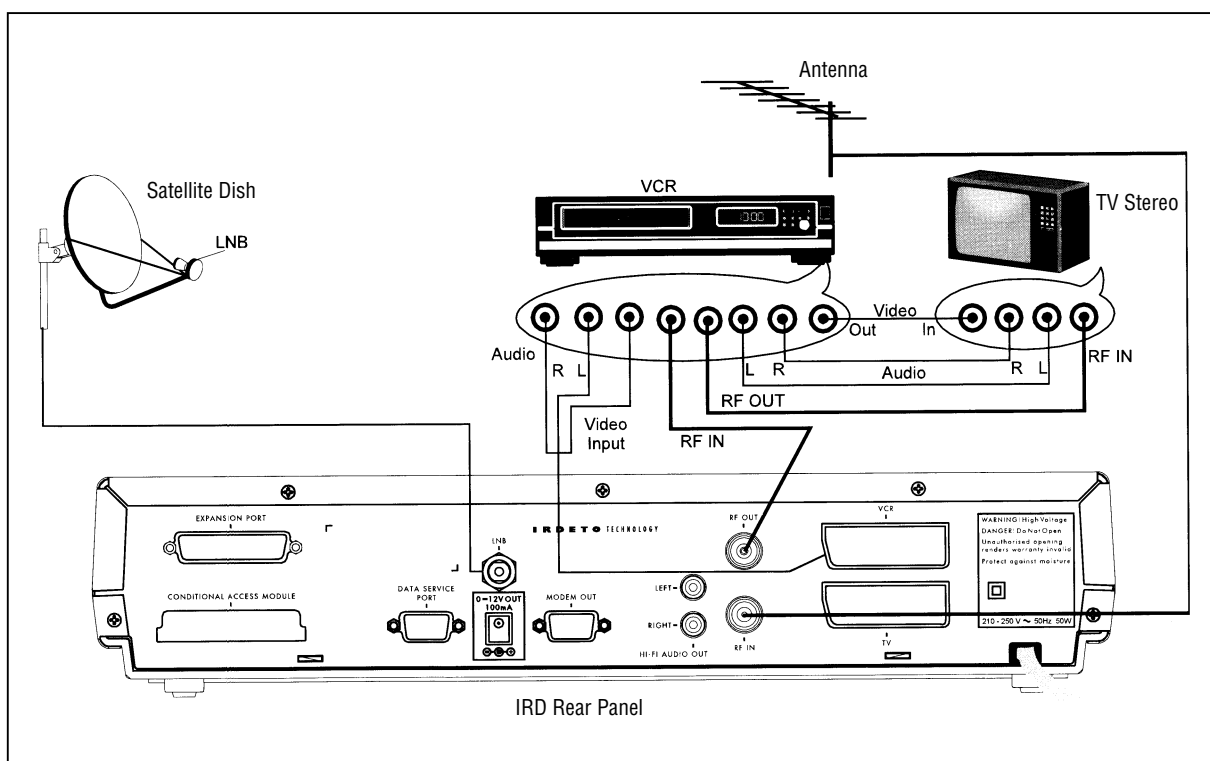


IRD, VCR (Stereo Audio/Video Inputs), TV (Stereo Audio/Video Inputs)

- 1** Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the antenna connector to the RF IN socket on the IRD.
- 2** Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN connector on the VCR.
- 3** Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN connector on the TV.
- 4** Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the coaxial cable should be turned until it is finger tight.
- 5** Use the SCART cable VIDEO OUT plug supplied with the IRD to connect the VCR SCART socket on the IRD to the VIDEO INPUT socket on the VCR.
- 6** Connect the VIDEO OUT socket on the VCR to the VIDEO INPUT socket on the TV.
- 7** Use the SCART cable LEFT and RIGHT AUDIO OUT plugs supplied with the IRD to connect the VCR SCART socket on the IRD to the LEFT and RIGHT AUDIO INPUT sockets on the VCR.
- 8** Connect the LEFT and RIGHT AUDIO OUT sockets on the VCR to the LEFT and RIGHT AUDIO INPUT sockets on the TV.
- 9** Connect the power plug of the IRD into the mains wall socket and switch the power on.
- 10** Enable SCART VCR at the TV/VCR Settings menu.

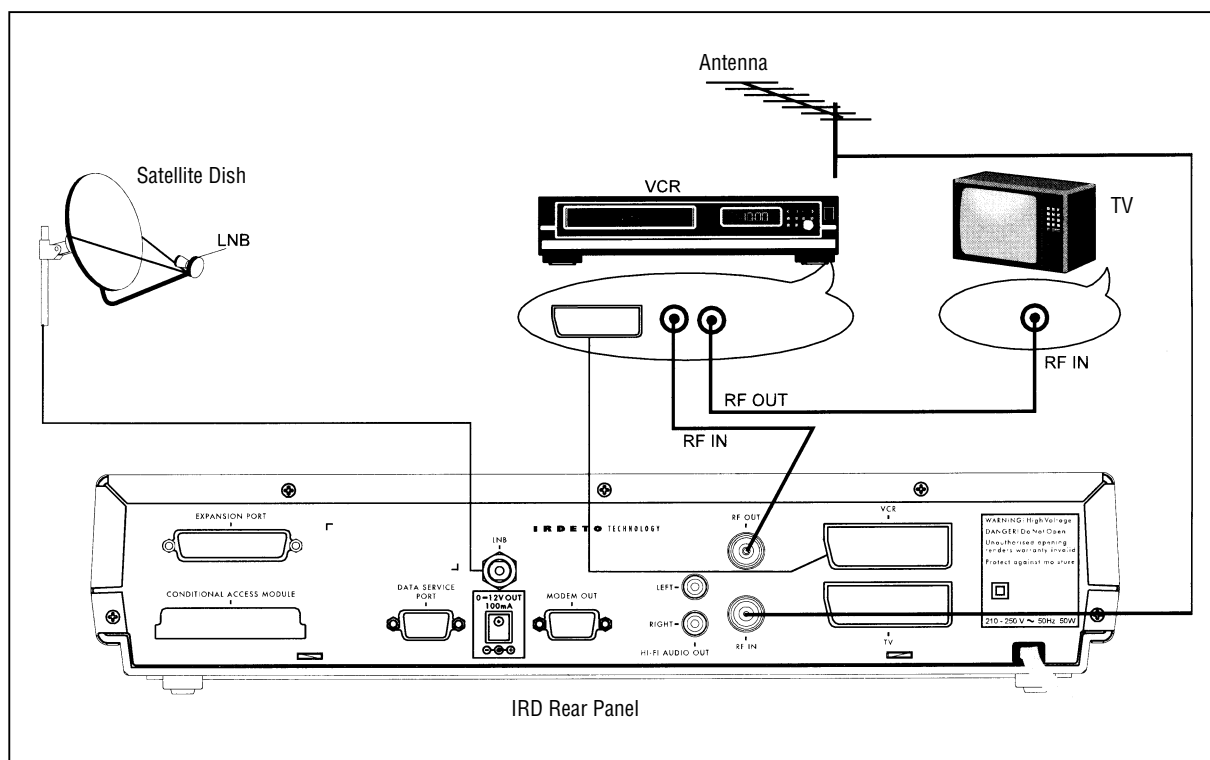


Disconnect the IRD from the mains before connecting or disconnecting the LNB.



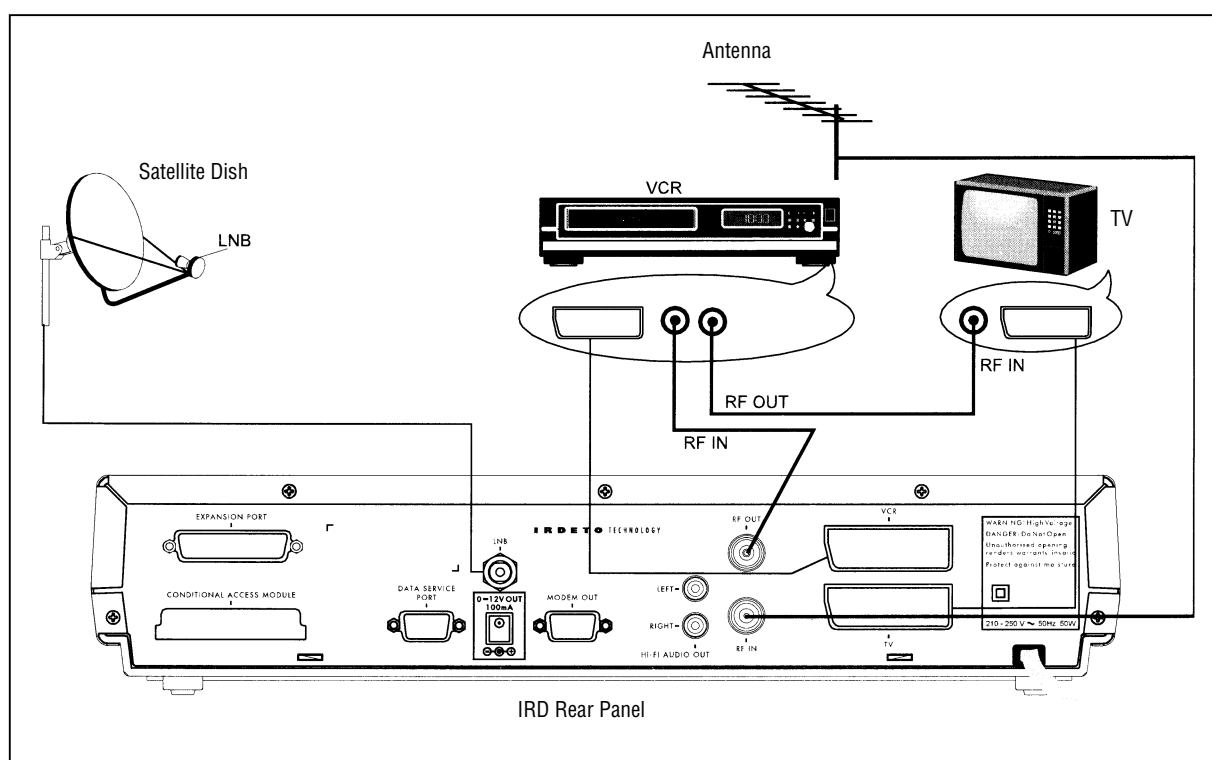
IRD, VCR (Scart Interface), TV (RF Input)

- 1 Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the antenna connector to the RF IN socket on the IRD.
 - 2 Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN connector on the VCR.
 - 3 Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN connector on the TV.
 - 4 Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the coaxial cable should be turned until it is finger tight.
 - 5 Use the SCART cable supplied with the IRD to connect the VCR SCART socket on the IRD to the SCART socket on the VCR.
 - 6 Connect the power plug of the IRD into the mains wall socket and switch the power on.
 - 7 Enable SCART VCR at the TV/VCR Settings menu.
- ! Disconnect the IRD from the mains before connecting or disconnecting the LNB.



IRD, VCR (Scart Interface), TV (RF Input/Scart Interface)

- 1 Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the antenna connector to the RF IN socket on the IRD.
 - 2 Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN connector on the VCR.
 - 3 Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN connector on the TV.
 - 4 Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the coaxial cable should be turned until it is finger tight.
 - 5 Use the SCART cable supplied with the IRD to connect the VCR SCART socket on the IRD to the SCART socket on the VCR.
 - 6 Use another SCART cable to connect the TV SCART socket on the IRD to the SCART socket on the TV.
 - 7 Connect the power plug of the IRD into the mains wall socket and switch the power on.
 - 8 Enable SCART VCR and the SCART TV at the TV/VCR Settings menu.
- ! Disconnect the IRD from the mains before connecting or disconnecting the LNB.

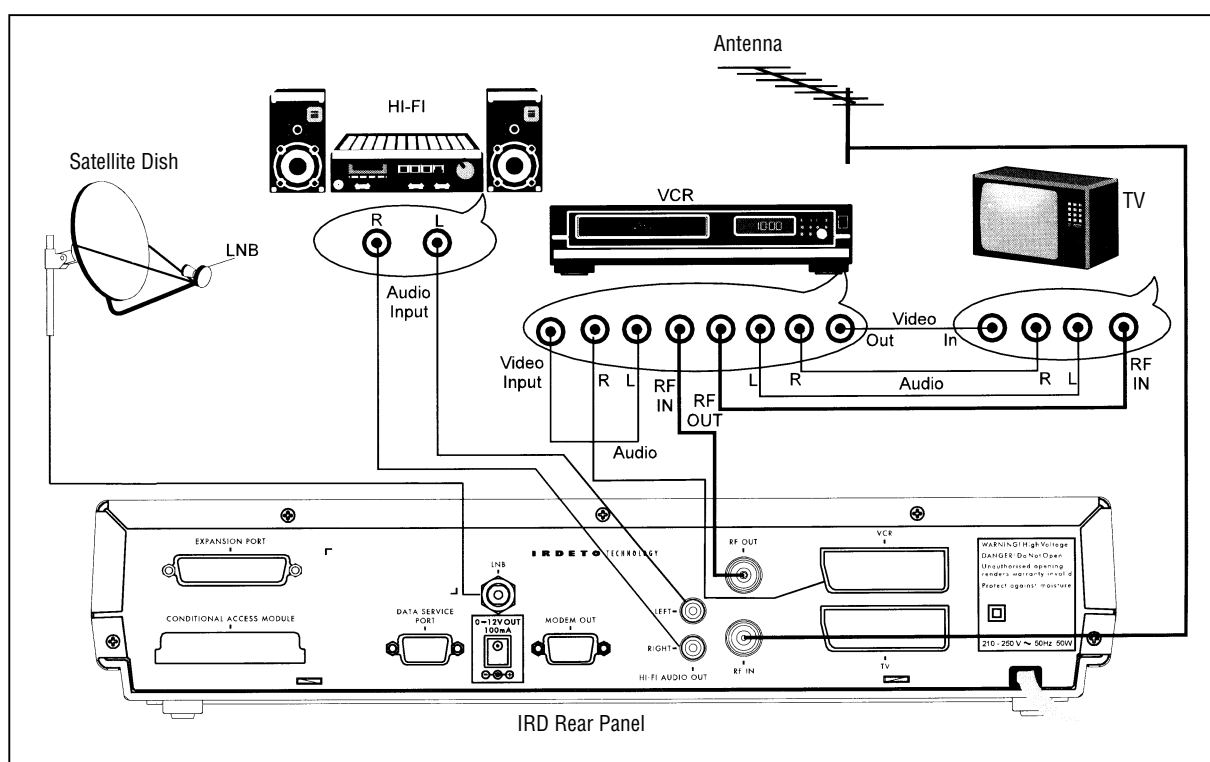


IRD, TV (Video Input), Hi-Fi

- 1** Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the UHF antenna connector to the RF IN socket on the IRD.
- 2** Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN socket on the VCR.
- 3** Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN socket on the TV.
- 4** Connect the coaxial cable from the LNB into the socket marked LNB on the IRD. The connector on the coaxial cable should be turned until it is finger tight.
- 5** Use the SCART cable VIDEO OUT plug supplied with the IRD to connect the VCR SCART socket on the IRD to the VIDEO INPUT socket on the VCR.
- 6** Connect the VIDEO OUT socket on the VCR to the VIDEO INPUT socket on the TV.
- 7** Use the SCART cable LEFT and RIGHT AUDIO OUT plugs supplied with the IRD to connect the VCR SCART socket on the IRD to the LEFT and RIGHT AUDIO INPUT sockets on the VCR.
- 8** Connect the LEFT and RIGHT AUDIO OUT sockets on the VCR to the LEFT and RIGHT AUDIO INPUT sockets on the TV.
- 9** Connect the LEFT and RIGHT HI-FI AUDIO OUT sockets on the IRD to the LEFT and RIGHT AUDIO INPUT sockets on the Hi-Fi.
- 10** Connect the power plug of the IRD into the mains wall socket and switch the power on.
- 11** Enable SCART VCR at the TV VCR Settings menu.

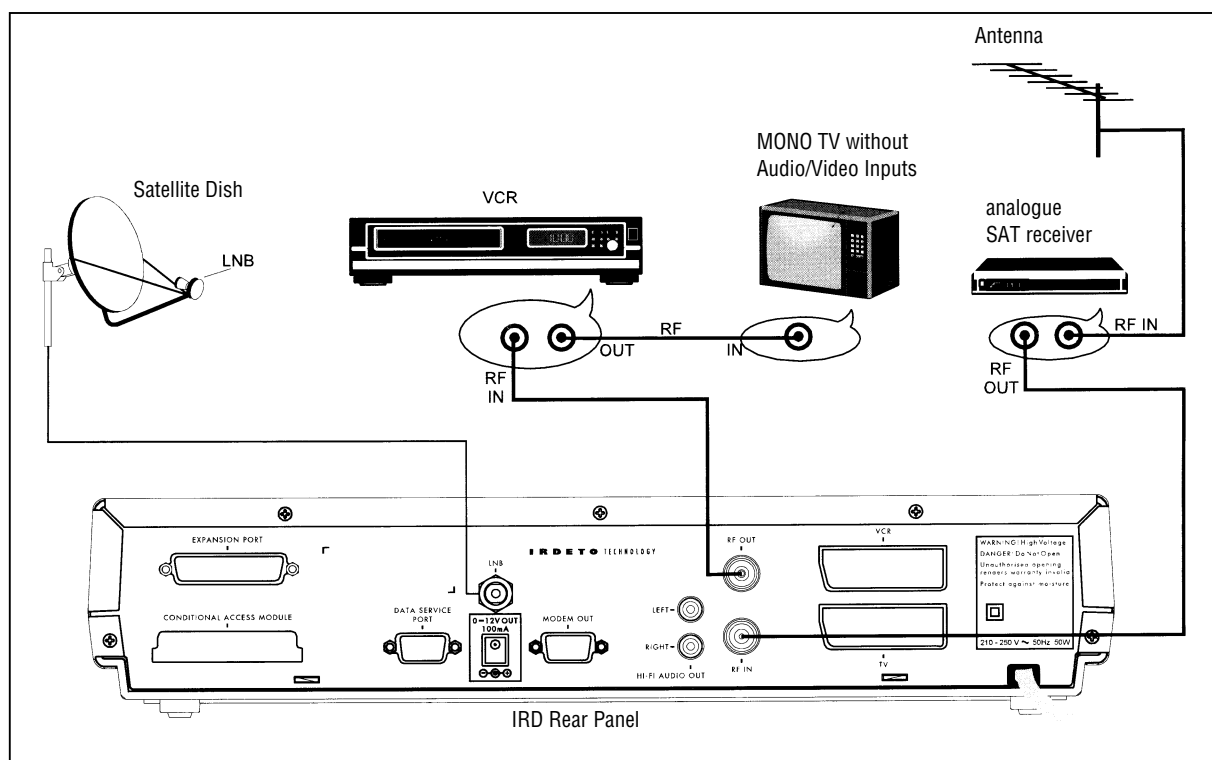


Disconnect the IRD from the mains before connecting or disconnecting the LNB.



IRD, TV, STR, VCR

- 1 Switch off the mains supply to the IRD before connecting or disconnecting the LNB. Connect the antenna connector to the RF IN socket on the analogue SAT receiver.
 - 2 Use a flylead to connect the RF OUT socket on the analogue SAT receiver to the RF IN connector on the IRD.
 - 3 Use the flylead supplied with the IRD to connect the RF OUT socket on the IRD to the RF IN connector on the VCR.
 - 4 Use the flylead supplied with the VCR to connect the RF OUT socket on the VCR to the RF IN connector on the TV.
 - 5 Connect the power plug of the IRD into the mains wall socket and switch the power on.
- ! Disconnect the IRD from the mains before connecting or disconnecting the LNB.

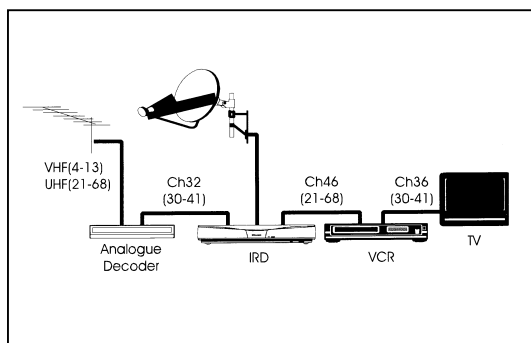


Tuning

i Equipment connected with cables between Video/Audio outputs and inputs (Baseband) do not require tuning. The signal quality obtained by this method is superior to RF connections.

Appropriate UHF channels must be used for distributing Radio Frequency (RF) signals via RF inputs and outputs on connected equipment. Adjusting the frequency (tuning) to a suitable value between each link in a chain of equipment, helps to prevent interference. Suitable frequencies to aim for are those that ensure the appropriate separation between frequencies used by all links in the chain of equipment and between frequencies of signals received over the air and frequencies of linked equipment.

The IRD RF output can be tuned over the full UHF band. TVs and VCRs can usually only be tuned within a smaller portion of the UHF band. Specific frequencies to use are determined by the equipment involved and over-the-air frequencies received at the installation site. The following diagram illustrates the principles to follow.



It is recommended to always tune in sequence from the TV towards the terrestrial antenna. The sequences for most configurations are thus:

TV, VCR, IRD and Analogue Decoder*

- 1** Tune the TV to receive terrestrial channels, then;
- 2** tune the TV to the VCR, then;
- 3** tune the TV to the IRD, then;
- 4** tune the TV to the Analogue Decoder, then;
- 5** tune the VCR (for recording purposes) to the terrestrial, satellite and Analogue Decoder channels.

TV, VCR and IRD

- 1** Tune the TV to receive terrestrial channels, then;
- 2** tune the TV to the VCR, then;
- 3** tune the TV to the IRD, then;
- 4** tune the VCR (for recording purposes) to the terrestrial, satellite and Analogue Decoder channels.

TV, IRD and Analogue Decoder

- 1** Tune the TV to receive terrestrial channels, then;
- 2** tune the TV to the IRD, then;
- 3** tune the TV to the Analogue Decoder.

TV and IRD

- 1** Tune the TV to receive terrestrial channels, then;
- 2** tune the TV to the IRD.

The manufacturers' manuals for equipment (TV, VCR, analogue decoder) connected in your system should preferably be available for reference during the tuning process.

* Analogue Decoder = GRUNDIG Satellite TV Receivers STR 322 TWIN, STR 400 AP, STR 501, STR 502, STR 511, STR 512, and compatible analogue satellite receiver/decoders.



Tuning Procedure


NEW SYSTEM, OR RETUNE EXISTING SYSTEM			
TV – IRD –	TV VCR IRD –	TV – IRD ANALOGUE DECODER	TV VCR IRD ANALOGUE DECODER
Do steps 1 to 3 and 10 to 19	Do steps 1 to 19	Do steps 1 to 3 and 10 to 25	Do steps 1 to 26

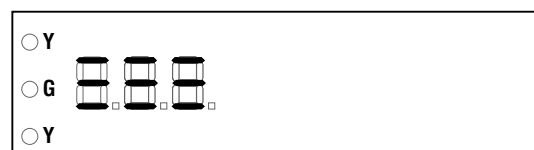
EXISTING SYSTEM WITH NO INTERFERENCE			
TV – IRD –	TV VCR IRD –	TV – IRD ANALOGUE DECODER	TV VCR IRD ANALOGUE DECODER
Do steps 10 to 19	Do steps 12 to 19	Do steps 10 to 25	Do steps 10 to 26

Carry out the steps specified by the above tables.

- 1** Ensure that a properly installed antenna is connected to the Antenna IN/RF IN connector of the TV. Switch the TV on.
- 2** Tune the TV to receive all the terrestrial channels that you require.
- 3** Remove the antenna connector from the TV. Connect one end of a flylead to the RF IN/ANTENNA IN connector on the TV.
- 4** Using a flylead, connect the RF OUT connector on the VCR to the RF IN/Antenna IN connector on the TV.
- 5** Select a free UHF channel on the TV for the VCR. Play a recorded tape or, preferably, set the VCR test signal switch to ON.
- 6** Tune the selected TV channel until the test signal/video from the VCR is displayed clearly.
- 7** Connect the antenna to the VCR RF IN connector.
- 8** Select all the channels on the TV one by one and ensure that no interference is visible.
If interference or loss of signal quality is noticed on any channel, change the RF remodulator frequency of the VCR (Consult the VCR User Manual). Repeat steps 6 and 8 until the interference is eliminated.
- 9** Remove the antenna from the VCR RF IN connector. Switch the VCR test signal switch to off. Connect one end of a flylead to the VCR RF IN connector.
- 10** Connect the free end of the flylead to the IRD RF OUT connector.
- 11** Connect the IRD to the mains supply and switch the power on at the wall socket.

- 12** If necessary, press  on the RCU to switch the IRD from standby to normal mode.

- 13** Press  on the RCU to switch to menu mode. The IRD front panel should now display the following:



- 14** Select a free channel on the TV and tune the channel on the TV until the Main Menu of the IRD is displayed clearly.



- 15** Connect the antenna to the RF IN connector on the IRD.

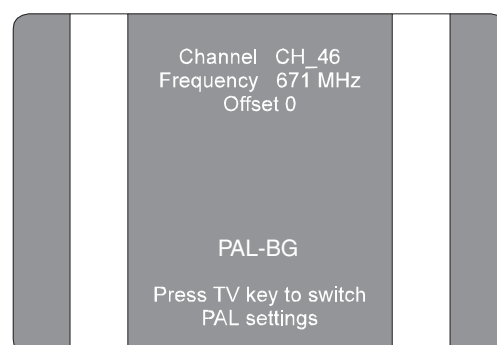
- 16** Select all the channels on the TV one by one and ensure that no interference is visible.

If there is no interference, go to step 17.





If interference or loss of signal quality is noticed on any terrestrial channel:

Select the channel allocated to the IRD on the TV.

Press  on the RCU to exit the menu mode and then press  twice on the RCU to display the UHF Tuning Menu.



A channel number (initially 46) will be displayed on the IRD front panel.

Change the channel number to two more or two less than the existing number by pressing  or  twice on the RCU. The following will happen as soon as  or  is pressed:

- The TV display is lost because the TV is not tuned to the new channel.
- The new channel number is displayed on the front panel of the IRD.

Retune the channel allocated to the IRD on the TV until the IRD test pattern is clearly visible.

Repeat step 16 until interference on all channels is eliminated.

17 Disconnect the mains supply power to the IRD.

18 Connect the cable from the satellite dish to the LNB connector on the IRD.

Connect the mains supply power to the IRD and ensure that the power is switched on at the wall socket.

19 Select all the channels on the TV one by one and ensure that no interference is visible.

If there is no interference, go to step 20.

If interference or loss of signal quality is noticed on any terrestrial channel repeat step 16.

20 Remove the antenna from the IRD RF IN connector.

21 Connect a flylead between the analogue SAT receiver RF OUT connector and the IRD RF IN connector.

22 Switch the test pattern on the Analogue Decoder to on.

23 Select a free UHF channel on the TV and tune the TV until the test pattern is clearly displayed on the TV.

24 Connect the antenna to the RF IN connector on the Analogue Decoder.

25 Select all the channels on the TV one by one and ensure that no interference is visible.












If interference or loss of signal quality is noticed on any channel, change the RF remodulator frequency of the Analogue Decoder (Consult the Decoder User Manual). Repeat steps 23 and 25 until the interference is eliminated.

26 Select the VCR channel on the TV and tune the VCR to:


- All the terrestrial channels
- The IRD output (Satellite Services)
- The Analogue Decoder output.




Summary of Installation Settings

LNB SETTINGS			
Step	Menu	Press RCU Key	Select Option
1			
2	Main Menu	6	Installation
3	Installation	1	LNB Settings
4	Security	Key in PIN, 	
5	LNB Settings	1	LNB Power
6	LNB Power		LNB Power on
7			
8	LNB Settings	2	External Switch Settings
9	External Switch Settings		Switch on
10			
11	LNB Settings	3	LNB Type
12	LNB Type		Standard LNB
13			
14	LNB Frequency	3	10600 MHz*
15		 , 	
16	LNB Settings		
17	Installation		

* NB Check on the label of the LNB that this is the correct value!

SIGNAL DETECTION			
Step	Menu	Press RCU Key	Select Option
1	Installation	2	
2	Signal Detection		Adjust dish for maximum signal
3			
4	Installation		

UHF TUNING			
Step	Menu	Press RCU Key	Select Option
1	Installation	3	
2	UHF Tuning	3	UHF Tuning
3		Cursor keys 	UHF CH_46 and Offset 0
4	Installation		



MANUAL CHANNEL TUNING

Step	Menu	Press RCU Key	Select Option
1	Installation	4	
2	Man Channel Tuning	1	Frequency
3		OK	
4		Type 12012	
5		OK	To save
6		2	Symbol Rate
7		Type 27500	
8		OK	To save
9		3	Polarisation
10		OK, OK...	Until Vert.
11		4	FEC 2/3
12		OK, OK...	Until you have
13		5	Return with these settings
		OK	

TV/VCR SETTINGS

Step	Menu	Press RCU Key	Select Option
1	Installation	5	
2	TV/VCR Settings	1	SCART TV
3	SCART TV	OK	Yes
4		▽	Aspect Ratio
5	Aspect Ratio	OK, OK...	Until you have 4:3
6		▽	PAL Type
7	PAL Type	OK, OK...	Until you have PAL-BG
8		▽	SCART VCR
9	SCART VCR	OK	Yes
10		EXIT	
11	Installation		

Installation Setup

i The installation option on the Main Menu provides access to important technical settings. A summary of the keys to press and the values to enter for a default installation is provided on the previous page.

! Do not change any installation settings before carefully noting the value of the setting you want to change and ensuring that the new and old values are written down on page 49. Incorrect settings will prevent the IRD from operating correctly.

i An access code must first be entered before the Installation Menu and its submenus can be accessed. This measure helps to prevent accidental changes to the setup. The access code is 9949 and a facility to change this number is not provided.

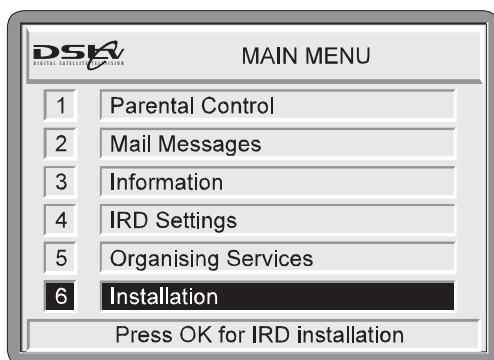
LNB Power ON/OFF

The Low Noise Block downconverter (LNB) amplifies the signal received by the satellite dish and lowers the frequency of the signal. The signal is then fed from the LNB at the dish via a cable to the IRD. Power is usually supplied to the LNB from the IRD via the cable.

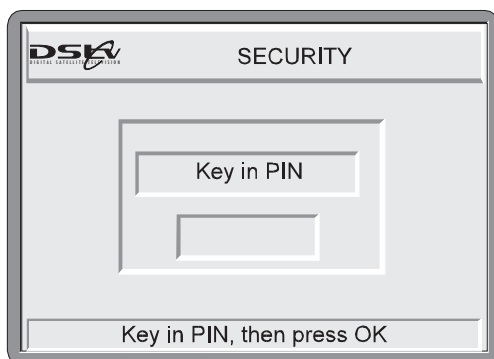
In most installations the correct setting for LNB Power is ON. Certain special applications may require the setting to be OFF.

To set the LNB power ON or OFF, do the following:

- 1 Press **MENU** on the Main Menu. The Main Menu is displayed.



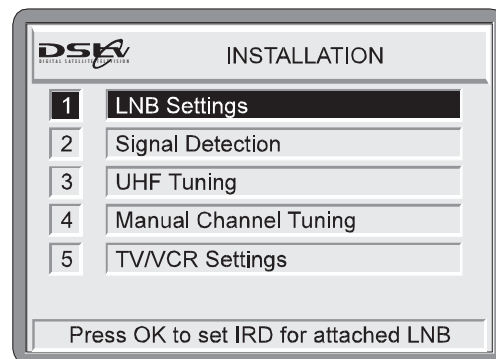
- 2 Press 6 Installation. The Security screen is displayed.



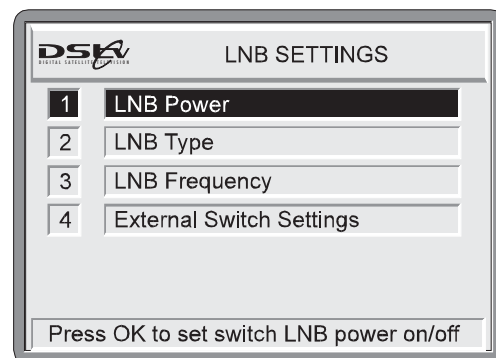
- 3 Type the PIN using the keypad on the RCU and then press **OK**. The PIN is 9 9 4 9.

i This is the installation PIN. A separate PIN code is required for Parental Control. Incorrect PINs return you to the Main Menu.

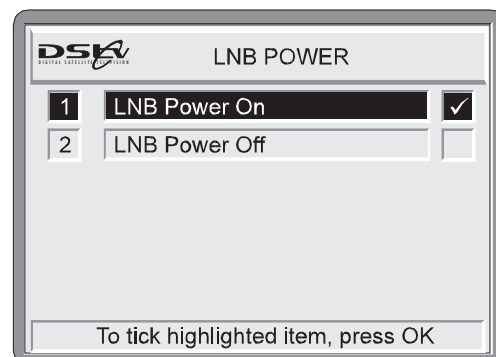
After successfully entering the installation PIN, the Installation Menu is displayed and you have full access to change the setup.



- 4 Press 1 LNB Settings. The LNB Settings Menu is displayed.



- 5 Press 1 LNB Power. The LNB Power Menu is displayed. Press 1 to select ON or press 2 to select OFF. A **✓** is displayed next to your selection.



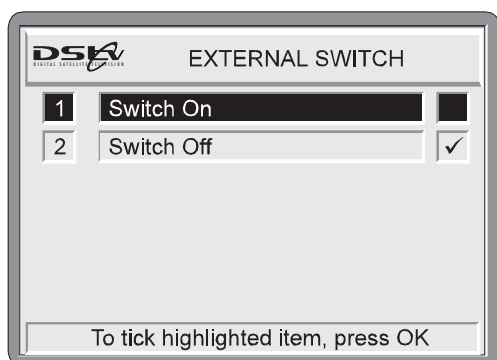
- 6 Press **EXIT** to return to the previous menu or **MENU** to return to the service.

External Switch Settings

The LNB used on the dish determines the settings of the external switch, which switches the 12 V DC to the external socket ON or OFF.

To set the external switch ON or OFF:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 1 LNB Settings.
The LNB Settings Menu is displayed.
- 4 Press 4 External Switch Settings.
The External Switch Settings Menu is displayed.



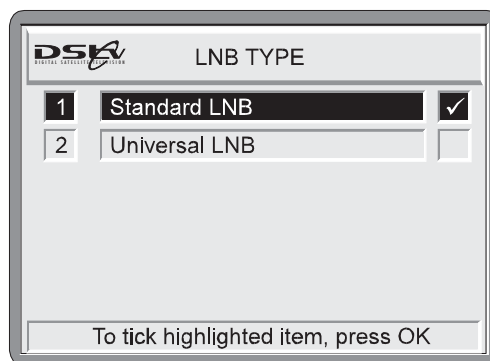
- 5 Press 1 to select ON or press 2 to select OFF.
- 6 Confirm your selection by pressing **OK**. A ✓ is displayed next to your choice.
- 7 Press **EXIT** to return to the previous menu or **MENU** to return to the service.

LNB Type

The LNB Type enabled must be appropriate for the LNB installed on the satellite dish.

To set the type:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 1 LNB Settings. The LNB Settings Menu is displayed.
- 4 Press 2 LNB Type. The LNB Type Menu is displayed.



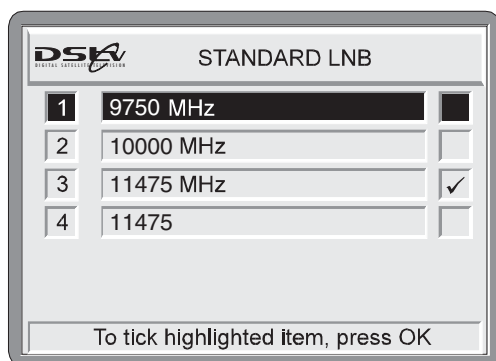
- 5 Two LNB types have been programmed into the IRD. Select the appropriate LNB type by using **Δ** or **▽** or by pressing the menu option number on the RCU.
- 6 Confirm your selection by pressing **OK**. A ✓ is displayed next to your choice.
- 7 Press **EXIT** to return to the previous menu or **MENU** to return to the service.

LNB Frequency – Standard LNB

The LNB local oscillator frequency must be appropriate for the LNB installed on the satellite dish. Universal LNBs specified for Eutelsat and Astra reception normally require this setting to be 11475. The appropriate frequency is printed on a label on the LNB.

To set the frequency:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 1 LNB Settings.
The LNB Settings Menu is displayed.
- 4 Press 3 LNB Frequency.
The LNB Frequency Menu is displayed.



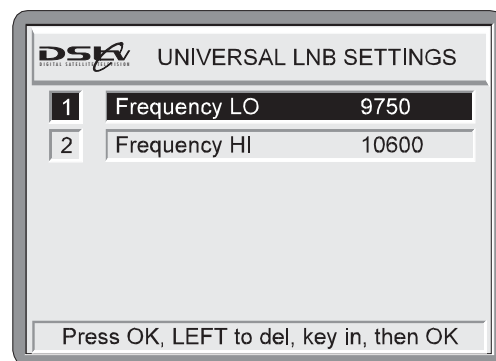
- 5 Three different LNB frequencies have been programmed into the IRD.
The factory preset frequency of 11475 MHz has a ✓ next to it. The tick means that it has been selected.
- 6 Select the appropriate LNB frequency for the LNB by using **△** or **▽** or by pressing the menu option number on the RCU.
- 7 Press **OK** to select your choice.
- i If the LNB requires a non-standard frequency, press 4 to set this frequency.
Press **OK** and enter the required frequency.
Press **OK** to confirm. A ✓ is displayed next to the selected frequency.
- 8 Press **EXIT** to return to the LNB Settings Menu or **MENU** to return to the service.
- i Before changing any setting, fill out the Installation Settings Sheet on page 49.

LNB Frequency – Universal LNB

The LNB local oscillator frequency must be appropriate for the LNB installed on the satellite dish. LNBs specified for Eutelsat and Astra reception normally require the high frequency 10600 and the low frequency 9750. The appropriate frequencies are printed on a label on the LNB.

To set the frequency:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 1 LNB Settings.
The LNB Settings Menu is displayed.
- 4 Press 3 LNB Frequency.
The Universal LNB Settings Menu is displayed.





- 5 Two different LNB frequencies (low and high) have been programmed into the IRD.
- 6 Select the appropriate LNB frequency for the LNB by using **△** or **▽** or by pressing the menu option number on the RCU.
- 7 Press **OK** to select your choice.
- i If the LNB requires a non-standard frequency, press **<** to delete the preset frequency and enter the required frequency.
Press **OK** to confirm.
- 8 Press **EXIT** to return to the LNB Settings Menu or **MENU** to return to the service.
- i Before changing any setting, fill out the Installation Settings Sheet on page 49.

Signal Detection

i This facility can be used to help align the satellite dish and to confirm that a signal is being received from the satellite.

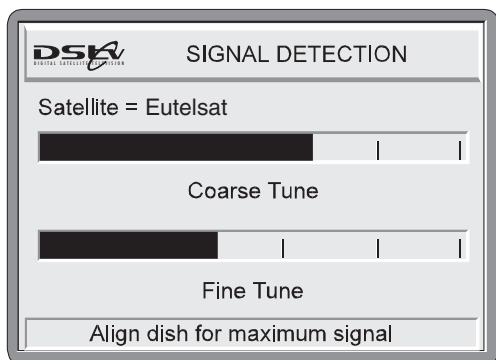
! For LNB adjustment refer to the LNB User Manual. The IRD signal detection facility is only useful for final alignment of a dish that is already aimed roughly at the satellite.


1 Switch the IRD to the normal mode by pressing  on the RCU or  on the front panel.

2 Press  on the RCU. The Main Menu is displayed.

3 Press 6 Installation. Type the installation PIN and press . The Installation Menu is displayed.

4 Press 2 Signal Detection. The Signal Detection screen is displayed.



5 Adjust the alignment of the dish to obtain the maximum signal strength as indicated by the bars on the screen. Press  to switch between the coarse and fine tuning modes.

The audio tone increases in pitch as the dish is moved closer to the best position. Set the volume on the TV to an appropriate level.

6 Physically lock the dish into position.

7 Press  to return to the Main Menu.

UHF Tuning, PAL I/BG

This screen allows the user to:


- Select a UHF tuning channel and/or to
- Select the PAL I or PAL BG standard.

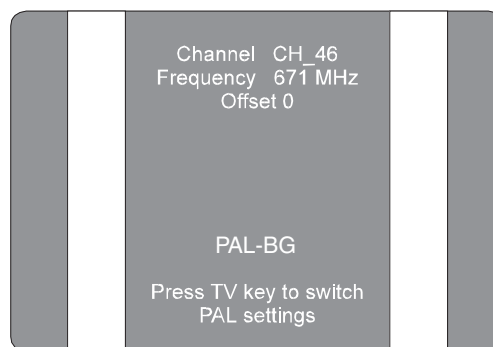
UHF tuning is discussed in detail on page 33. The following description of UHF tuning summarises the procedure.

1 Press  on the RCU. The Main Menu is displayed.



2 Press 6 Installation. Type the installation PIN and press . The Installation Menu is displayed.

3 Press 3 UHF Tuning. The UHF Tuning screen is displayed.



i Pressing  on the RCU twice (while not in menu or EPG mode) will also cause the screen to be displayed.





The IRD front panel display shows 46 (the current UHF channel number).

4 Press  or  to increase or decrease the channel number.


The channel number, frequency and offset are displayed. The changed channel number is displayed on the IRD front panel.

5 Offset values from -11 to +11 can be selected to fine-tune the IRD by pressing  or  on the RCU.

6 The setting is stored by pressing  on the RCU.

7 Press  to exit from the menu.

8 Retune to the new channel.

i Pressing  at any time while this screen is displayed will return you to the service without saving changes made.



PAL I/BG

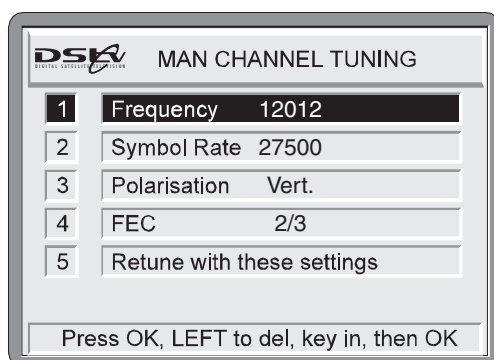
The appropriate standard for equipment used in Italy is PAL BG. If, however, you use the IRD with PAL I equipment, do the following:

- 1 Press **MENU** on the RCU. The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 3 UHF Tuning. The UHF Tuning screen is displayed.
- 4 Press **TV**. Check that the appropriate PAL standard is now indicated on the UHF tuning menu.
- 5 Press **OK** to save the change. A message »Changes saved« is displayed. Press **MENU** to exit from the menu.

Manual Channel Tuning

The IRD uses the values shown in this menu to identify which signal to search for "home in on". The factory preset values identify the Eutelsat signal. These values will, normally, not need to be changed. If, however, it is necessary to change the values, do the following:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
 - 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
 - 3 Press 4 Manual Channel Tuning.
The Man Channel Tuning screen is displayed.
- i** The factory preset values for the Eutelsat signal are shown in the following menu.



- 4 Select and edit any or all of the following:
1 Frequency; 2 Symbol Rate; 3 Polarisation;
4 FEC (Forward Error Correction).
- 5 Press **OK** to edit the settings.
- 6 Type the required value. **<** can be used to delete numbers. Press **OK** when the settings are correct.
- 7 Once you have completed the settings, press 5 to retune with the new settings.
- 8 A rotating segment on the IRD front panel indicates that the IRD is searching for default frequency.
- 9 The IRD reverts to the standby mode. Press **ON** to return to normal mode.



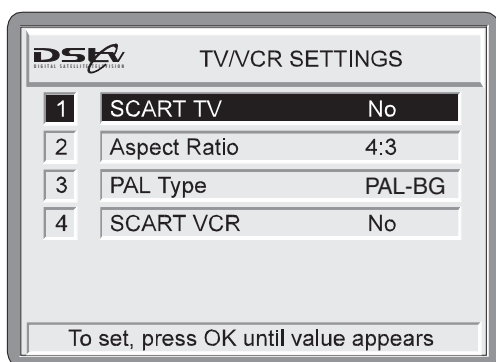
TV/VCR Settings

The SCART Settings depend on how the TV and the VCR are connected to the decoder. When a SCART TV is used, SCART TV must be on in the TV/VCR Settings menu. If you have a SCART VCR connected, SCART VCR must be on in the same menu.

For a wide TV screen the Aspect Ratio should be set to 16:9. The PAL Type is obviously determined by the TV system used in the country.

If it is necessary to change the values, do the following:

- 1 Press **MENU** on the RCU.
The Main Menu is displayed.
- 2 Press 6 Installation.
Type the installation PIN and press **OK**.
The Installation Menu is displayed.
- 3 Press 5 TV/VCR Settings.
The TV/VCR Settings screen is displayed.



- 4 Select any or all of the following: 1 SCART TV; 2 Aspect Ratio; 3 PAL Type; 4 SCART VCR.
- 5 Press **OK** to change the settings.
- 6 Once you have completed the settings, press **MENU** to exit from the menu.

Inserting the Smart Card and CA Module

Inserting the Smart Card

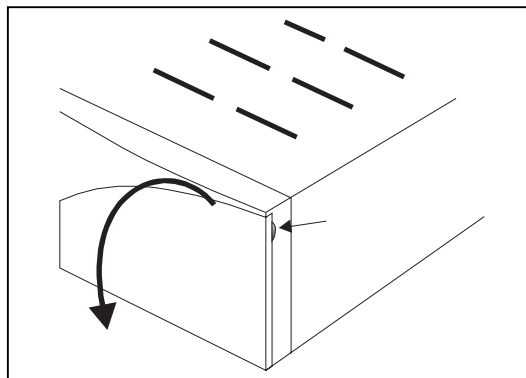
The Smart Card is the key to unlocking the IRD. The IRD will not decode scrambled TV or Audio Services when the card is not inserted or is incorrectly inserted.

Insert it the Smart Card into any IRD and you will instantly have access to all the services you subscribe to and your existing PIN will work as normal.

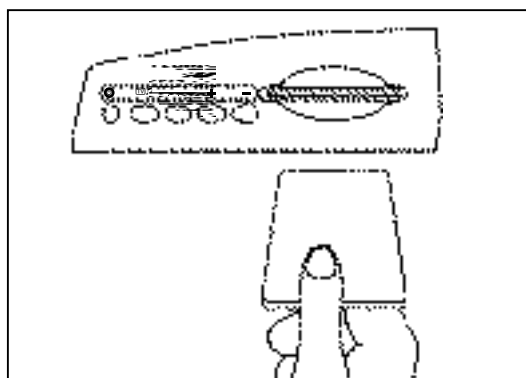
The Smart Card is not required for access to menus except the Parental Control sub-menus that require your PIN to be entered first. The setting of the Installation parameters as discussed on page 38 (Item 6 on the Main Menu) does not require the Smart Card to be inserted. When travelling, take your Smart Card with you.

The Smart Card is supplied separately and forms part of your subscription. The Smart Card is updated over-the-air when your subscription details change, for instance each time you purchase additional products (details regarding products will be announced later), the Smart Card is updated.

Please follow the instructions carefully for inserting the Smart Card into the slot behind the right-hand flap of the IRD.



- 1 Prise the flap open with your fingernail at the slot near the top of the right-hand edge. Swing the flap downwards. The card slot will now be visible to the right of the row of keys.
- 2 Hold the Smart Card horizontally with the white triangle on top pointing to the slot. Insert the card fully into the slot.

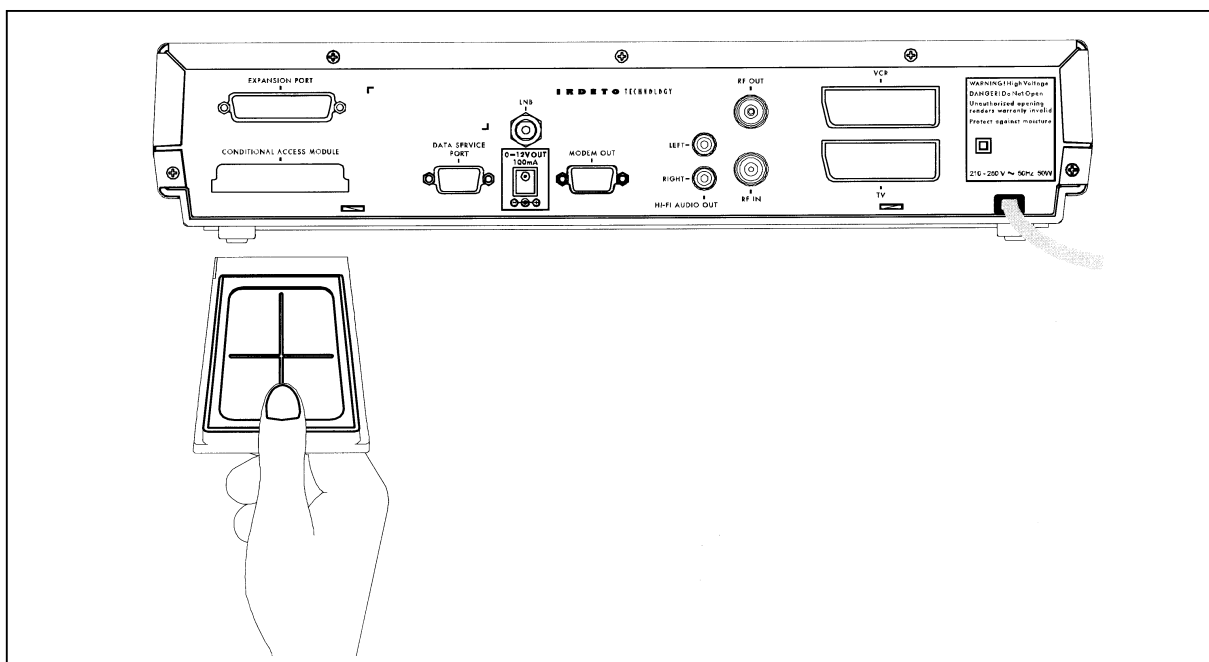




Inserting the CA Module

The CA Module provides the crucial conditional access technology required to decode the scrambled signals broadcast by the Service Provider. The modular approach ensures that the cost of possible future upgrades will be greatly reduced and that the IRD will keep in step with the latest advances in conditional access technology.

The IRD is supplied with the CA Module inserted into a slot in the rear panel. Before removing or re-inserting the module, please follow the procedure described below.

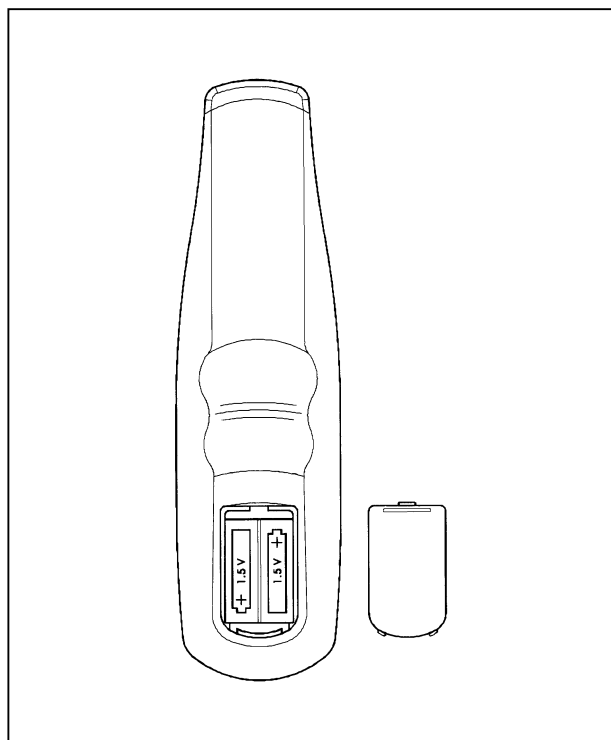


- 1 Disconnect the Mains Power to the IRD.
- 2 Remove the CA Module by holding the protruding portion firmly and pulling it out carefully.
- 3 Refer to the figure above. Hold the module horizontally with the thin edge (connector) at the bottom and facing away from you. A raised cross will be visible on the upper surface.
- 4 Carefully engage the module into the CA Module slot provided and slide it inwards. When the connector starts to engage, a slight resistance will be felt. Continue pushing it inwards until the connector engages fully.
- 5 Connect the Mains Power.



Changing Batteries in the RCU

The RCU is powered by two AAA size batteries (lady cells). The life of the batteries is about one year. Replace the batteries as required.



Battery Replacement

- Load the new batteries with their polarities (+ and -) aligned correctly.
- If you do not intend to use the RCU for a long period of time, remove the batteries and store them in a cool, dry place
- Remove spent batteries immediately and dispose of them.
- Do not use old and new batteries together. (Also never use an alkaline battery with a manganese battery.)

Load the batteries as follows:

- 1** Push back the battery compartment locking lever.
- 2** Lift the battery compartment lid.
- 3** Insert the batteries with their polarities aligned, as indicated inside the battery compartment.
- 4** Replace lid.



Note on enviromental Protection:

Do not throw exhausted batteries in the household refuse. Hand over the old batteries to your dealer or public collecting points when buying new ones.

Upgrading the IRD



IRD S/W Upgrade

Refer to page 21.



Adding a Modem

Many exciting interactive features will become available in the near future. The IRD is ready for these features and has a modem port for connection to your telephone line via an external modem.

Details will be announced before these options become available.

Due to continued product improvement, this specification is subject to change without prior notice.

GENERAL

Front Panel Control Buttons	On/Standby, TV/Audio, Programme/Volume \pm (Up/Down)
RCU	Multi-button, infrared, battery operated RCU. Range 7 m, \pm 45° in horizontal plane, \pm 20° in the vertical plane. Batteries Type AAA (lady cells)
User Interface	Full On-screen Display with point and select menus for setup. TV viewing and audio listening
Subscription service facilities	Smart Card and Plug-in CAM and over-the-air upgradeable software Modem port and high-speed expansion port
UHF Modulator	PAL BG or PAL I, Ch 22 to 69 preset to Ch 46
Mains Voltage	210 – 250 V AC 50 Hz
Power Consumption	50 W Maximum
Dimensions	384 x 90 x 290 mm WxHxD
Weight	2.6 kg (unpacked)
Operating Conditions:	Temperature 5° C to 45° C
Relative Humidity	< 38° C wet bulb temperature 5% to 80%
Altitude	0 to 2000 m

CONNECTORS

Single LNB input	F-connector
Switched 12 V	DC Jack connector
Terrestrial antenna input	IEC 169 female
TV RF output	IEC 169 male
TV SCART	SCART
VCR SCART	SCART
Left channel audio output to TV/VCR	RCA
Right channel audio output to TV/VCR	RCA
Modem port	9 pin D-type male
Data service port	9 pin D-type female
Expansion port	25 pin D-type female
CA module slot	JEIDA 4.0 PCMCIA

SATELLITE RECEIVER TUNER

Receiver Frequency Range	950 to 2050 MHz
Input Signal Level	-20 dBm to -65 dBm
Polarisation	13.5/18 V, DC 350 mA
Switching	maximum, short circuit protection

DEMODULATOR

Type	QPSK
Input Data Rate	18 to 28 Mb/s
Error Correction	DVB specified FEC code rates
VIDEO IRD	MPEG-2
AUDIO IRD	
Decompression	MPEG-1, MPEG-2 Layer I and II, Musicam
Channels	Single channel, joint stereo, stereo
Sampling Frequencies	32.0 kHz, 44.1 kHz and 48.0 kHz

REMODULATOR RF SIGNAL

Depth of Modulation	80%
Output Channel Range	22 to 69 (preset to channel 46)
Vision-to-sound ratio	14 dB
Vision-to-sound frequency variance	\pm 20 kHz from nominal
Vision carrier frequency drift	\pm 10 kHz
RF output level	73 dB V
Output spuri	<-60 dB
RF stray radiation	<20 dB V at antenna input
Intermodulation	-60 dBc
RF bypass bandwidth	47 MHz to 860 MHz
RF bypass insertion gain	2 dB
RF bypass channel tilt	1 dB
MEMORY	
RAM	512 kbytes
Flash – RAM	1 Mbyte
Non-volatile memory	Default values stored for 2 months after power-down

VIDEO SIGNAL

Output	1 V peak-to-peak, 75 Ω
Format	PAL
Bandwidth	5 MHz

AUDIO SIGNALS

Output	1 V r.m.s. into 10 k Ω
Frequency range	20 Hz to 20 kHz at 44.1 kHz sampling rate
Dynamic range	80 dB
Distortion	\pm 0.2% @ 1 kHz
Noise	-80 dB
L-R level difference	0.5 dB
Crosstalk	-60 dB

DATA SERVICES

Maximum data rate	19200 bits/s
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EXPANSION PORT

- descrambled MPEG-2 data stream
- (8-bits)
- MPEG-2 clock and status signals
- I²C serial interface
- 5 V at 500 mA auxiliary power




IRD FACTORY SETTINGS

- Remod Channel = 46
- SCART TV = No
- SCART VCR = No
- TV-Standard = PAL BG
- TV Aspect Ratio = 4 x 3
- LNB Actual = 10600 MHz
- LNB Manual = 10600 MHz
- LNB Power = ON
- Homing Channel
Frequency = 12012 MHz
- Homing Channel
Polarisation = Vertikal
- Homing Channel
Modulation = QPSK
- Homing Channel
Symbol Rate = 27,5 MSym/s
- Homing Channel
FEC Rate = 2/3
- Info Plate time out = 10 seconds
- Parental Control = Unlocked









GRUNDIG Europe



B-1930	GRUNDIG BELUX N.V. Deltapark, Weihoek 3, Unit 3G Zaventem 00 32/2-7 16 04 00	N-1401	GRUNDIG NORGE A.S. Glynitveien 25, Postboks 234 Ski 00 47/64 87 82 00
GB	GRUNDIG UK LTD. Elstree Way, Borehamwood, Herts, WD6 1RX Großbritannien/Great Britain 00 44/1 81-3 24 94 00 Technical Service Unit 35, Woodside Park, Wood Street Rugby, Warwickshire, CV21 2NP Großbritannien/Great Britain 00 44/1 78-8 57 00 88	DK-3500	GRUNDIG DANMARK A/S Lejrvvej 19 Værløse 00 45/44 48 68 22
EIR	GRUNDIG IRELAND LTD. 2 Waverley Office Park, Old Naas Road Dublin 12 00 03 53/1-4 50 97 17	SF-02271	GRUNDIG OY Luoteisrinne 5 Espoo 0 03 58/9-8 04 39 00
F-92563	GRUNDIG FRANCE S.A. 5 Boulevard Marcel Pourtout Rueil Malmaison Cedex 00 33/1-41 39 26 26	S-17104	GRUNDIG SVENSKA AB Albygatan 109 d, Box 4050 Solna 00 46/8-6 29 85 30
CH-8302	GRUNDIG SCHWEIZ AG Steinacker Straße 28 Kloten 00 41/1-8 15 81 11	PL-62800	GRUNDIG POLSKA SP.Z.O.O. Ul. Częstochowska 140 Kalisz 00 48/62-7 66 77 70
P-1495	GRUNDIG PORTUGUESA Comércio de Artigos Electrónicos, Lda. Rua Bento de Jesus Caraça 17 Cruz Quebrada, Lisboa 0 03 51/1-4 19 75 70	A-1120	GRUNDIG AUSTRIA Ges.m.b.H. Breitenfurter Straße 43-45 Wien 00 43/1-81 11 70
		NL-1096	GRUNDIG NEDERLAND B.V. Gebouw Amstelveste Joan Muyskenweg 22 CJ Amsterdam 00 31/20-5 68 15 68

Installation Settings				
IRD No				
Date of Purchase				
CAM No				
Smart Card Serial No				
Work Order No				
Installer Name				
Installer Tel No				
Antenna Cross Pole				
RF Modulator				
Channel Set				
Offset				
LNB				
Type				
LNB Power				
LNB Frequency				
Manual Channel Tuning				
Frequency				
Symbol Rate				
Polarisation				
FEC				
Date				

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